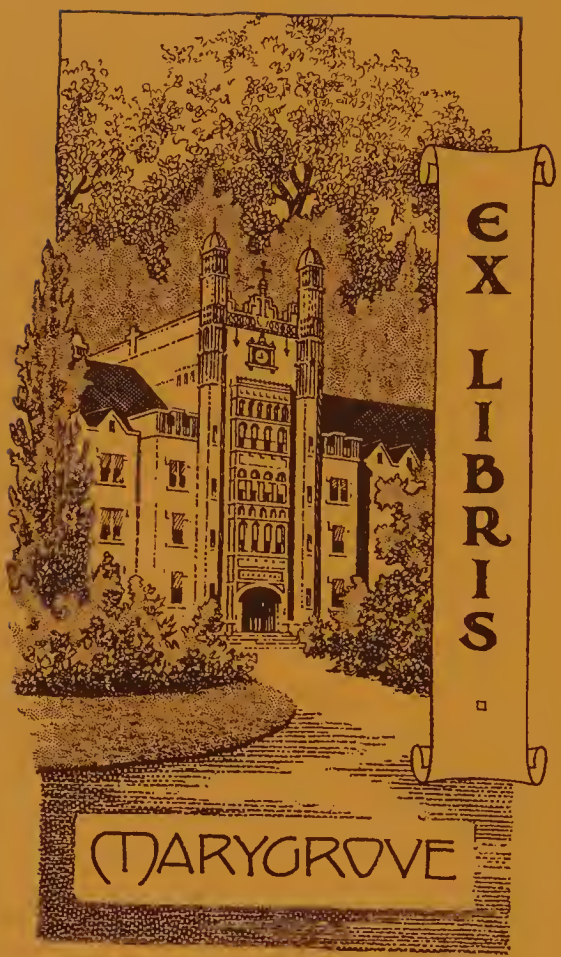
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A SYSTEMATIC SOURCE BOOK IN RURAL SOCIOLOGY

VOLUME III

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A SYSTEMATIC SOURCE BOOK IN RURAL SOCIOLOGY

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VOLUME III

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PREFACE

IN this final volume of the *Source Book* is presented an analysis of rural populations and rural-urban relationships. The four chapters in Part Four deal with the physical, the vital, and the psycho-social traits of farmers and peasants. In an endeavor to give an adequate picture of the farmer-peasant population, much quantitative as well as descriptive material is presented. Part Five, consisting of three chapters, completes the work with a consideration of the relationships existing between the farmer-peasant and other social classes and between the total rural *milieu* and the composite urban society. The final chapter is a restatement of the theory outlined in Volume II that rural and urban differentiation, once it has reached its limit, breeds the germs of its own decline. City and country tend to approach each other again, either through the decline of the city or the rise of the country.

May it be said in conclusion that these volumes represent the attempt, first, to systematize a science that is in existence largely because thousands have made detailed special researches; second, to formulate theories of general validity; and third, to stimulate students of rural and of urban sociology—American, European, and Asiatic—to interpret their data in terms of these or other theories as well as in relation to local problems.

Finally, the present volume combines the approaches of the two preceding volumes. It attempts not only to *measure* but to *interpret*. The response to the first two volumes on the part of the prominent specialists in the field—American, European, and Asiatic—has been very gratifying. This is evidence that the labor of the editors has not been wasted. It is hoped that in the future development of sociology there will be the same cooperation, coordination, and fusion of intellectual effort that we have been trying to realize in this work. The coordination becomes a creative task and tends to yield, as we hope it has here, scientific results greater than the sum of the special researches.

P. A. S.
C. C. Z.
C. J. G.

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PART FOUR

PHYSICAL, VITAL, AND PSYCHO-SOCIAL TRAITS OF FARMERS AND PEASANTS

CHAPTER XVII

PHYSICAL TRAITS OF THE RURAL AND URBAN POPULATIONS

After the study of the rural social world in its fundamental aspects we turn to an investigation of the physical, vital, and psycho-social characteristics of farmers and peasants and of the differences existing between agricultural and urban populations. Both the theoretical and the practical importance of such a study is evident and need not be defended.

There are some investigators, for instance, some of the so-called "cultural sociologists," who maintain that such a study does not belong to the field of sociology. Without discussing the shortcomings of cultural sociology itself, it may be said that a study of these characteristics is, even from the standpoint of the culturists themselves, a strictly sociological one.

One of the fundamental tasks of cultural sociology has been the study of the diffusion among various groups and strata of the population of the most diverse sorts of things, such as patterns of designs, various plates, and so forth. If a study of the classification and distribution of horses and cows or of certain forms of plates, knives, and pottery is a task of sociology, then a study of the distribution of physical, vital, and psycho-social traits among the rural and urban classes is a task of sociology par excellence. A knowledge of the distribution of these traits is both theoretically and practically far more important than a knowledge of the particular pattern or form of a basket. When the culturist suggests that the nature of physical and vital traits makes them biological rather than cultural phenomena, the answer is that horses and cows are also by nature biological and that many tools studied are by nature inorganic. They become cultural phenomena only because their existence and diffusion depend on human existence and social conditions.

Similarly, physical, vital, and mental traits in their essence and their distribution are influenced by social conditions and are

cultural phenomena just as much as the pottery, the design, the horse, and the various other matters with which the cultural sociologists have concerned themselves. The prominent representatives of the biological and medical sciences who recently published a series of valuable studies under the titles "The Sociology of Venereal Diseases," "The Sociology of Tuberculosis," and "The Sociology of Inner Diseases," [1] are much more logical and scientific than the "culturists" in this respect.

It would be easy to answer all such objections as are voiced from time to time by a few sociologists, but it would be a waste of time. *Sapienti sat.* We pass them by and turn our attention to the problems that are to be considered in this chapter.

Are there consistent physical differences between rural and urban populations, between agricultural and nonagricultural classes? If so, what are they? Are they due to selection, environment, or both? Although a great deal has been written setting forth numerous and sometimes opposite theories on the problem, it cannot be said that it has been definitely solved up to the present time.

We shall not discuss here the obstacles to a successful solution of this problem,[2] but we shall consider the principal physical characteristics one by one, outline the results obtained in the field by various investigators, and suggest tentatively the most probable conclusions that may be based on these results. In order to save space we shall omit most of the evidence given in the *Principles* and set forth only general conclusions and some additional data. The readings for this chapter supplement and illustrate these statements.

A. STATURE

Are there any consistent differences in the average stature of the populations of the city and the country? May we say with some authors that, on the average, the city population is taller or shorter

[1] See, for instance, the volumes of the *Handbuch der sozialen Hygiene und Gesundheitsfürsorge,* ed. by A. Gottstein, A. Schlossmann, and L. Teleky, Berlin, 1925–1927, or the volume *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, Munich, 1913, where such titles and terminology are used by outstanding specialists in the field of medical science.

[2] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology,* New York, 1929, pp. 101–103.

than the country population? If such a consistent difference were found, would it be the result of selection, of environment, or of both? In a brief survey of the principal studies the relevant data are presented in two forms: comparisons of the average stature of city and country populations and comparisons of the average stature of people engaged in agriculture and those of other occupational groups. Let us turn to the first form of these comparisons:

A Summary of Studies Showing the Urban Population to be Taller than the Rural

Author	Groups Measured	Year	Conclusions
Lambert A. Quetelet.[3]	Population of Brussels, Louvain, Nivelles, and surrounding country in Belgium.	1823–1827	The average stature of the population of the towns was 164.85 cm.; of the country, 162.75 cm.
Otto Ammon.[4]	Recruits at the age of 20 to 22 years in the city and the country around Karlsruhe and Freiburg.	1886–1888	The percentage of tall men in the city was from 33.3 to 35.0 per cent as compared with 16.3 and 24.8 per cent in the country. The percentage of short people was also higher in the city.
C. Röse.[5]	Recruits at the age of 20 years from Dresden.	1905	The average stature of recruits with both parents born in the city was 166.2 cm.; of recruits with one parent born in the city, 165.7 cm.; and of recruits born in the country, 164.6 cm.

[3] Lambert A. Quetelet, "Sur la taille moyenne de l'homme dans les villes et dans les campagnes," *Annales d'hygiène publique et de médecine légale*, III, 24 (Paris, 1830).

[4] Otto Ammon, *Die natürliche Auslese beim Menschen*, Jena, 1893, chap. iv, and *Die anthropologische Untersuchungen der Wehrpflichtigen in Baden*, Hamburg, 1890.

[5] C. Röse, "Beiträge zur europäischen Rassenkunde und die Beziehungen zwischen Rasse und Zahnverderbnis," *Archiv für Rassen- und Gesellschafts-Biologie*, II, 748–751 (1905).

STUDIES SHOWING THE URBAN POPULATION TO BE TALLER THAN THE RURAL—*Continued*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
D. N. Anoutchin.[6]	Recruits from St. Petersburg, Moscow, Sebastopol, Toula, Kasan, and the provinces in which they are located.	1874–1883	Recruits from the country averaged a lower stature than recruits from urban centers of the provinces.
Arthur Geissler and R. Uhlitsch.[7]	21,173 children between the ages of 6.5 and 14.5 years in the city of Freiburg and the surrounding country.	1888	Children in the common schools of Freiburg were taller than the farm children in the surrounding country.
W. H. Pyle and P. E. Collings.[8]	2,000 children between the ages of 8 and 18 years in the rural schools of a Missouri County.	1918	Compared with the children in the small towns of Missouri, rural children were somewhat shorter: 7 per cent among the boys, and 2 per cent among the girls. The difference, however, is insignificant.
Fritz Zbinden.[9]	22 adult individuals in Lucerne.	1911	The average stature of the adult city individuals was 169.2 cm., as compared to 166.0 cm. for the country people of Lucerne.
W. T. Porter and Bayard Holmes.[10]	Some American city children.	1894	The average height of city children was somewhat above that of country children.

[6] D. N. Anoutchin, *O geographicheskom raspredelenii rosta moujskogo naselenia Rossii,* St. Petersburg, 1889, p. 165.

[7] Arthur Geissler and R. Uhlitsch, "Die Grossenverhältnisse der Schulkinder," *Zeitschrift des K. sächsischen statistischen Bureaus,* XXXIV, 28 (1888).

[8] W. H. Pyle and P. E. Collings, "The Mental and Physical Development of Rural Children," *School and Society,* VIII, 534 (1918).

[9] Fritz Zbinden, "Beiträge zur Anthropologie der Schweiz," *Archiv für Anthropologie,* X, 290 (1911).

[10] See the details in W. T. Porter, "The Seasonal Variation in the Growth of Boston

STUDIES SHOWING THE URBAN POPULATION TO BE TALLER THAN THE RURAL—*Continued*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
C. Schiotz.[11]	Country children in several districts of Norway.	1923	The average stature of country children was somewhat below that of town children.
S. H. Scheiber.[12]	Children in three large cities and the surrounding country in Hungary.	1880	City children were taller than the children in the surrounding country.
Fritz Holland.[13]	Recruits from the Netherlands.	1924	Recruits from rural parts (5,000 and less) had a higher percentage of low statures (1.59 m. and below) and a lower percentage of high statures (1.70 m. and above) than recruits from cities of 5,000 and more population or than the whole country.
Louis Villermé.[14]	Recruits from Paris and surrounding districts.	1816–1823	The Paris recruits were somewhat taller.
Rodolfo Livi.[15]	256,166 Italian recruits.	1900–1905	The average stature of peasant recruits was 0.4 cm. below the average stature of the country as a whole. (The province of Piedmont is an exception.)

School Children," *American Journal of Physiology,* LII, 121 (1920); Bayard Holmes, "A Study of Child Growth," *New York Medical Journal,* LX, 417 (1894).

[11] C. Schiotz, *Physical Development of Children and Young People from the Ages of 7 to 20 Years,* Christiania, 1923.

[12] S. H. Scheiber, "Untersuchungen über den mittleren Wuchs der Menschen in Ungarn," *Archiv für Anthropologie,* XIII, 233 (1881).

[13] See the *Annuaire statistique des Pays-Bas,* 1927, The Hague, p. 41.

[14] Louis Villermé, "Mémoire sur la taille de l'homme en France," *Annales d'hygiène publique et de médecine légale,* I, 354 (1829).

[15] Rodolfo Livi, *Antropometria militare,* Vol. II, Rome, 1905, p. 52, and *Antropometria,* Milan, 1900, p. 117.

STUDIES SHOWING THE URBAN POPULATION TO BE TALLER THAN THE RURAL—*Concluded*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
André Constantin.[16]	French soldiers.	1918–1919	In three of five groups studied the peasant soldiers were somewhat shorter than the soldiers born and raised in cities of 50,000 or more population. In the other two groups the situation was reversed.
Chalumeau, William Z. Ripley, and Eugène Pittard.[17]	Population of Basle, Lausanne, Neuchâtel, Borges, and Corsier in Switzerland.	1890–1891, 1908	The average stature of the city populations was above the average of their respective cantons.
Gustaf Retzius and Carl M. Fürst.[18]	Recruits from Stockholm and several industrial provinces.		The average stature of the recruits from Stockholm was higher than the average stature of those from Sweden.
Kiril G. Popof.[19]	Recruits from Bulgaria.	1901–1920	Recruits from Plovdiv had an average stature of 166.4 cm.; provincial recruits, 165.6 cm. Consequently, the percentage of taller statures was greater among the urban recruits. The same was true of the recruits from the urban and rural parts of Rousse.

[16] André Constantin, "Contribution à l'étude de corrélations physiques et psychosociologiques," *L'anthropologie,* XXIX, 281.

[17] *Schweizerische Statistik,* Lief, 1892, Table IX, p. 85; William Z. Ripley, *The Races of Europe: A Sociological Study,* New York, 1899, p. 551; Eugène Pittard and J. Kappeyne, "La taille humaine en Suisse," *Zeitschrift für schweizerische Statistik,* II, 185, 189 (1908).

[18] Gustaf Retzius and Carl M. Fürst, *Anthropologia suecica,* Stockholm, 1902, pp. 41, 46, 50, 51.

[19] Kiril G. Popof, "Résultats des mensurations anthropométriques des conscrits en

Without mentioning several other studies of similar character, we turn to studies that give evidence that the country population is taller than the city population.

STUDIES SHOWING THE RURAL POPULATION TO BE TALLER THAN THE URBAN

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
Charles B. Davenport, Albert G. Love, and Aleš Hrdlička.[20]	United States Army recruits (more than 1,000,000).	1917–1918	Urban recruits and recruits from industrial areas, with the exception of St. Paul and Minneapolis, were somewhat shorter than recruits from rural areas. The average stature of rural recruits was 67.87 inches; of urban recruits, 67.10 inches. The ratio between the urban and rural under-height recruits was 100 to 51.
Francis Galton.[21]	509 city and 296 country boys at the age of 14 years in Great Britain.	1876	Country boys were 1.25 inches taller than the city boys.
A. W. Tuxford and R. Ashleigh Glegg.[22]	583,640 school children from 3 to 14 years of age in England.	1911	Rural children at all ages studied were taller than urban children.

Bulgarie," *Bulletin de l'Institut international de statistique,* Vol. XXII, Rome, 1926, pp. 408–409.

[20] Charles B. Davenport and Albert G. Love, *Army Anthropology, Based on Observations Made on Draft Recruits, 1917–1918, and on Veterans at Demobilization, 1919 (The Medical Department of the United States Army in the World War,* Vol. XV, Part I), Washington, 1921, pp. 34 ff., 74–117, and *Defects Found in Drafted Men,* War Department, 1920, p. 391; Clark Wissler, "Distribution of Stature in the United States," *Scientific Monthly,* XVIII, 124 ff. (1924); Aleš Hrdlička, *The Old Americans,* Baltimore, 1925, pp. 85 ff.

[21] Francis Galton, "On the Height and Weight of Boys Aged 14, in Town and Country Public Schools," *Journal of the Anthropological Institute,* V, 174 (1876).

[22] A. W. Tuxford and R. Ashleigh Glegg, "The Average Height and Weight of English School Children," *British Medical Journal,* Vol. I (1911).

STUDIES SHOWING THE RURAL POPULATION TO BE TALLER THAN THE URBAN—*Continued*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
Austin B. Hill.[23]	Children 5 to 14 years of age from Essex.	1922	At the ages studied the children of agricultural laborers were taller than those of nonagricultural workers.
D. Noël Paton and Leonard Findlay.[24]	10,848 urban children and 5,884 rural children under 1 year, from 1 to 5 years, and above 5 years of age in Scotland.	1919–1923	Rural children exceeded urban children in stature. Other studies in Scotland have yielded similar results.[25]
John Beddoe, J. P. Harrison, Charles Roberts, and Rawson.[26]	Various samples of the urban and the rural population of England.	1870, 1882–1883	On the whole, with very few exceptions the rural population was somewhat taller than the urban. Farmers and agriculturists exceeded in stature nearly all city occupational populations, with the exception of the well-to-do and the upper classes. These generally had higher stature than the lower classes.
Emil Schmidt.[27]	9,506 school children from 7 to 14 years of age in Saalfeld district, Germany.	1892	Town children, at all ages, were shorter than the rural children.

[23] Austin B. Hill, *Internal Migration and Its Effects upon the Death-Rates: With Special Reference to the County of Essex* (Privy Council, Medical Research Council, Special Report Series, No. 95), London, 1925, p. 110.

[24] D. Noël Paton and Leonard Findlay, *Poverty, Nutrition, and Growth: Studies of Child Life in Cities and Rural Districts of Scotland* (Privy Council, Medical Research Council, Special Report Series, No. 101), London, 1926, pp. 21 ff., 35 ff., 72–76.

[25] See the summary, *ibid.*, pp. 72–76.

[26] Charles Roberts and Rawson, Final Report of the Anthropological Committee, 1884, London; John Beddoe, *On the Stature and Bulk of Man in the British Isles,* London, 1870, and *The Races of Britain,* Bristol, 1885; J. P. Harrison, *The Influence of Town Life on Stature,* Report of the British Anthropometric Association, 1883, LIII, 568.

[27] Emil Schmidt, "Die Körpergrösse und das Gewicht der Schulkinder des Kreises Saalfeld," *Archiv für Anthropologie,* XXI, 385 (1892–1893).

STUDIES SHOWING THE RURAL POPULATION TO BE TALLER THAN THE URBAN—*Continued*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
Erich Peiper.[28]	14,194 city and 28,334 country school children in Pommern, Germany.	1912	Country school children exceeded the city school children in stature.
Émile P. Levasseur [29] and Jacques Bertillon.[30]	52,418 recruits from Saxony.	1852–1854	The proportion of short statures (160.4 cm.) was somewhat less, and of high statures (167.5 cm.) was somewhat greater among the rural than among the urban recruits, but the difference was slight.
G. Brant.[31]	Recruits from Alsace-Lorraine.	1898	The recruits from eight large cities yielded a slightly higher percentage of low statures and a slightly lower percentage of higher statures than the rural recruits.
Georges Carlier.[32]	Recruits from northern France.	1892	The difference was very insignificant. According to occupation, however, the average stature of recruits from the farming population was above nearly all the skilled, the unskilled, the semiskilled, and the clerical groups from cities.

[28] Erich Peiper, "Die körperliche Entwicklung der Schuljugend in Pommern," *Archiv für soziale Hygiene,* VII, 109 (1912).

[29] Émile P. Levasseur, *La population française,* Vol. I, Paris, 1889, p. 383.

[30] According to data of Jacques Bertillon, the percentage of low statures is a little higher, and that of tall statures is somewhat lower among the peasant recruits than in the whole of Saxony. Jacques Bertillon, "La taille en France," *Revue scientifique,* 3d series, Vol. X, No. 16, p. 486 (October 17, 1885).

[31] G. Brant, "Die Körpergrösse der Wehrpflichtigen," *Beiträge zur Anthropologie Elsass-Lothringen,* 1898, Heft 2.

[32] Georges Carlier, "Des rapports de la taille avec le bien-être," *Annales d'hygiène publique et de médecine légale,* XXVII, 294 (1892).

STUDIES SHOWING THE RURAL POPULATION TO BE TALLER THAN THE URBAN—*Continued*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
Eugène Pittard, J. Kappeyne, and Pierre L. Dunant.[33]	Samples of the population of: Vevey, Nyon, Aigle, Payerne, Mondon, Yverdon, and Geneva, with the cantons by districts.	1867, 1891, and 1908	The average stature of the population of the cities was somewhat less than that of the corresponding country districts.
Luigi Pagliani.[34]	Turin, Italy.	1876	
F. Oloriz.[35]	Madrid, Spain.	1896	
Johannes Ranke, Kisskalt, and F. T. Schmidt.[36]	Recruits from Bavaria, children of Königsberg and the surrounding country, children of city and country.	1881, 1916, and 1924	Country recruits were taller. City children were shorter than country children. Only the children of privileged city classes were taller than the country children.
D. Anoutchin.[37]	Recruits from Kronstadt and Warsaw and recruits from the provinces.	1874–1883	City recruits were noticeably shorter than country recruits.
Report of the Principal Medical Officers of Health of New South Wales.[38]	112,359 boys and 104,211 girls from 5 to 16 years of age in the schools of Australia.	1918–1919	Rural children were the tallest, and the metropolitan children were the shortest, while the children in the towns occupied an intermediate position.

[33] Pierre L. Dunant, *Taille moyenne des habitants de Genève,* Geneva, 1867; Pittard and Kappeyne, *op. cit.,* p. 189.

[34] Luigi Pagliani, *Sopra alcuni fattori dello sviluppo umano,* Turin, 1876.

[35] F. Oloriz, *La talla humana en Espana,* Madrid, 1896.

[36] Johannes Ranke, "Zur Statistik und Physiologie der Körpergrösse der bayerischen Militärpflichtigen," *Beiträge zur Anthropologie Bayerns,* 1881, IV, 1; A. Korff-Petersen, "Die Wohnung als Grundlage der Gesundheitsfürsorge," *Handbuch der sozialen Hygiene,* 1927, pp. 206–209.

[37] Anoutchin, *op. cit.,* p. 165.

[38] Annual Report of the Principal Medical Officers of Health of New South Wales for the Years 1918–1919, Sydney, 1921.

STUDIES SHOWING THE RURAL POPULATION TO BE TALLER THAN THE URBAN—*Continued*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
Bird T. Baldwin.[39]	Iowa boys and girls from city and country.	1916–1921	Country boys and girls matured earlier than city boys and girls and were taller and heavier.
Robert M. Woodbury.[40]	Children less than 6 years of age in city and country in the United States.	1921	Rural children were taller than city children.
W. T. Porter and Bayard A. Holmes.[41]	34,354 American children.	1894	In several cities the children were shorter than those in the country.
André Constantin.[42]	French soldiers.	1918	In two out of five groups studied the peasant soldiers were taller than the soldiers from cities of 50,000 and more population.
Lagneau.[43]	Samples of the population and children from 2 to 7 years of age in Paris.	1893	The Paris population, on the average, was shorter than the population of rural France.
Costa.[44]	Recruits from agricultural (Dunkergue, Avesne) and industrial (Lille, Hazebrouk, Valenciennes) districts in France.	1920	Rural recruits were taller than industrial recruits.

[39] Bird T. Baldwin, "A Measuring Scale for Physical Growth and Physiological Age," Fifteenth Yearbook of the National Society for the Study of Education, 1916, p. 15, and *The Physical Growth of Children from Birth to Maturity*, University of Iowa, 1924, pp. 71, 191, and *passim*.

[40] Robert M. Woodbury, *Statures and Weights of Children under Six Years of Age*, United States Department of Labor, Children's Bureau, Publication No. 87, 1921.

[41] Porter, *op. cit.*; Holmes, *op. cit.*

[42] Constantin, *op. cit.*, p. 281.

[43] Quoted from the data given in the *Journal of the American Statistical Association*, Vol. IV (1895).

[44] See the *Bulletin de la société d'anthropologie de Paris*, 1866–1877, XI, 174–175.

STUDIES SHOWING THE RURAL POPULATION TO BE TALLER THAN THE URBAN—*Concluded*

AUTHOR	GROUPS MEASURED	YEAR	CONCLUSIONS
Gustaf Retzius and Carl M. Fürst.[45]	Recruits from Sweden.	1897–1898	The average stature of recruits from Upsala and several industrial regions of Sweden was less than the national average stature for Sweden and that of several agricultural provinces of Sweden.
Soren Hansen and P. Hertz.[46]	Children in Copenhagen and rural children in Denmark.	1904	The average stature and weight of the children of Copenhagen were below those of the country children in Denmark.
Kiril Popof.[47]	Recruits from Bulgaria.	1901–1920	Recruits from rural parts of Sofia and Varna were slightly taller than recruits from these cities.
A. Descoudres.[48]	Children from 2 to 7 years of age.	1922	Paris children were shorter.

This outline gives a summary of the principal studies of the comparative stature of urban and rural populations, without regard to the occupational groups comprised by each of these complex divisions. The rural population, though predominantly agricultural, also includes several groups engaged in occupations other than agriculture. The urban population, in its very nature, represents a hodgepodge of the most varied occupational groups, including even agriculture. Since we are interested not only in the rural-urban groups but also in comparing the physical characteristics of the peasant and agriculturist class with those of other classes, the data must be tested by the studies of stature

[45] Retzius and Fürst, *op. cit.*, pp. 41–60.

[46] See *Meddelelser om Danmarks Anthropologi* and *Pedagogical Seminary*, XX, 542–548 (1913).

[47] Popof, *op. cit.*, pp. 408–409.

[48] A. Descoudres, *Le développement de l'enfant de deux à sept ans*, Paris, 1922.

in agricultural and nonagricultural occupational groups. At present only a few studies of this kind exist; of these we shall give summaries of the most important. The table below gives data relating to the stature of Italian,[49] English,[50] and French [51] occupational classes.

AVERAGE STATURE OF THE AGRICULTURAL CLASSES IN ITALY, ENGLAND, AND FRANCE COMPARED WITH THAT OF OTHER OCCUPATIONAL GROUPS

ITALY (256,166 RECRUITS)		ENGLAND (1,935 ADULT INDIVIDUALS)		FRANCE	
Class	Cm.	Class	Cm.	Class	Cm.
Students		Professional men	175.6	Professional men	169.5–169.7
Professional men	166.9	Small business men	172.6	Farmers, gardeners, and keepers of vineyards	168.2
Butchers	165.7	Agricultural workers, miners, and sailors	171.5	Officials	167.6
Masons	165.1	City workers...	169.2	Small business men	167.1
Merchants and business men.	165.0	Sedentary workers (tailors and factory operatives) ..	167.4	Masons	166.5
Smiths	165.0	General population	171.5	Drivers	166.4
Bricklayers 164.8				Servants and day laborers	166.0
Bakers	164.7			Shoemakers	165.8
Tailors and shoemakers .	164.5			Railroad operatives 165.0	
Cart drivers and day laborers..	164.4			Textile factory operatives	165.4
Peasants	164.3				
Barbers	164.3				

In Russia Dr. Erismann found that the average stature of 100,000 factory operatives in Central Russia was below the average stature of the peasant recruits.[52]

Of 52,419 recruits studied in Saxony, the average stature of peasants and agricultural laborers was about the same as the average for all occupations. The percentage of low statures among peasants was somewhat above the average for all occupations, as

[49] Rodolfo Livi, *Antropometria,* p. 117, and *Antropometria militare,* II, 49–59, Tables II and III at the end of the book.

[50] Charles Roberts, "On the Uses and Limits of Anthropometry," *Bulletin de l'Institut international de statistique,* Vol. VI, Rome, 1892, pp. 15–16.

[51] Carlier, *op. cit.*

[52] Friedrich Erismann, *Untersuchungen über die körperliche Entwicklung des Fabrikarbeiter in Zentral Russia,* Tübingen, 1899.

was the percentage of higher statures, with the exception of those above 178.3 centimeters.[53]

The average stature of agricultural recruits, as compared with the stature of various specific occupational groups, was below that of professional men, commercial people, and masons, but higher than that of textile workers, miners, bookbinders, shoemakers, tailors, bakers, workers making furniture or nails, dressmakers, and several other groups.[54] These comparisons summarize the principal data in the field.

Interpretation of results.—The literature of the various studies contains several hypotheses that attempt an interpretation of the results. These hypotheses may be divided into two main classes: environmental and selective.

The environmental hypotheses try to explain this disparity in stature by the different living conditions in the city and in the country. Among these specific conditions, food is especially important. For instance, Ammon attributed the higher stature of the city recruits in Karlsruhe and Freiburg to the malnutrition of the country recruits. Food was less abundant. Therefore they grew more slowly than the urban recruits.[55] In a similar way, but more definitely, Erismann explained the lower stature of the factory workers in Russia, and Niceforo accounted for the lower stature of the peasants of southern Italy.[56] Livi explained the low stature of the Italian peasantry as due partly to poor environmental conditions, particularly to insufficient food.[57] Bertillon and a great many other investigators gave a similar interpretation of the differences in stature among various occupational groups.

The selective hypotheses assume that stature is determined by race and that the differences in stature between city and country populations are due to the factor of selection of hereditary types.

[53] See Jacques Bertillon's paper in the readings.

[54] *Ibid.*, p. 486; Jacques Bertillon, "Taille," *Dictionnaire encyclopédique des sciences médicales,* Paris, 1885. For a further discussion of stature see Pitirim A. Sorokin, *Social Mobility,* London and New York, 1927, chap. x.

[55] Otto Ammon, *Die natürliche Auslese beim Menschen,* chap. iv. This explanation in favor of the urban recruits does not prevent Ammon from recognizing that race is the principal factor influencing stature, and that environment may aid or retard growth and thereby influence the stature of individuals at the ages of 20 to 22 when growth is not yet finished.

[56] Erismann, *op. cit.*, Alfredo Niceforo, *Ricerche sui contadini,* Milan, 1907, pp. 31 ff. and *passim.*

[57] Rodolfo Livi, *Antropometria,* p. 118, and *Antropometria militare,* Vol. I, 1896, pp. 46 ff. and *passim.*

Therefore, if the city population is taller than the country population, it means that it is composed chiefly of individuals of a taller race than is the country population, and vice versa. This is the essence of the selective hypotheses, which may be divided further into two classes. One group claims that the migration to the cities is in itself a selective factor, and that, as a rule, the cities attract the taller rather than the shorter people. This theory ascribes to stature an instrumental rôle in the distribution of individuals in urban and rural districts.[58]

The other theory of selection does not ascribe such importance to the rôle of stature; it merely states that the average stature of the population of a given city or rural district is established by its racial composition, whatever may be the factors determining that racial composition. Wherever and whenever city populations are composed of predominantly tall races their average stature will be higher than that of country populations composed of predominantly shorter races, and vice versa.

This theory was demonstrated particularly by Livi and may be stated quite briefly. Racial origin is the principal factor in stature. A city population, as contrasted with a country population, is composed of migrants from far more numerous, remote, and racially heterogeneous places. Hence it is natural to expect these contrasts between urban and rural stature: first, the stature of the city population is apt to show greater contrasts and greater variability than that of the country population; secondly, consistent differences in the average stature of the urban and the rural population cannot therefore be expected; and, thirdly, in a city located where the natives in the surrounding area are racially tall, the city population will be, on the average, shorter, since it is composed not only of migrants from its surrounding tall population but of migrants from other places where the population is short.

The influx of short individuals into a city population naturally leads to a lowering of the average stature. If, on the contrary, the city is situated in an area where the population is predominantly short, the urban population will, for the same reason, be taller than the population of the surrounding country. The population of the city would be composed, in this case, not only of migrants of short stature from the surrounding districts but of migrants

[58] See, for instance, Georges Vacher de Lapouge's work in the readings following.

from other more remote places where the population may be of tall stature.[59]

Which of these interpretations is to be recognized as accurate and complete? The answer is neither, if either pretends to be exclusive. Without entering into a detailed discussion of the problem,[60] we may simply say that Livi's theory is possibly nearer the truth than either the extreme environmental or the selective-racial theory. Indeed, at present there is a great mass of data corroborating Livi's theory. In the first place, he has shown that the stature of the population is shorter in cities situated in the areas of Italy where the stature of the native population is relatively tall; while in the areas where the stature of the native population is relatively short, the stature of the population of the cities is higher than that of the surrounding country.[61] This is also true in regard to the stature of peasants as compared with that of city dwellers. The Italian peasantry is less mobile than the urban population and is racially short in stature, especially in southern Italy. Under such circumstances the population of the Italian cities is naturally taller, because its migrants include individuals from remote places where racial stature is taller, as well as the racially short peasants from the surrounding areas.

From the standpoint of Livi's hypothesis it is comprehensible that, as a general rule, the stature of the city population in Scotland and England is lower than that of the country population. The Scotch and English are racially tall. Since the percentage of migrants from other countries is far lower in the rural districts than in the cities, the average stature of the rural people is high. In the cities, mingling with the tall Scotch and English, there are migrants and their offspring from other districts and other countries where the average stature is considerably lower. As a result the city population, composed of such a mixture, is naturally lower, on the average, than the rural population of Scotland and England.

This explains, too, why in New South Wales and Australia the rural population is taller than the city population and why the populations of some cities in France, Germany, and Russia are

[59] See the works of Livi cited, *passim*. Relevant fragments are given in the readings.
[60] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles*, pp. 109 ff.
[61] Rodolfo Livi, *Antropometria militare*, I, 49 ff.

taller, while in some other cities they are shorter than the populations of their surrounding countries.

Finally, the theory accounts satisfactorily for the fact that the population of the rural and agricultural areas of the United States has been found taller than that of the urban and industrial areas.

> The great cities lie prevailingly in the lower part of the table (with lower statures), not because city life tends to stunt growth but because cities attract the short-statured people from southeastern Europe, who remain in them instead of going upon the farms. On the other hand, the agricultural areas are occupied by persons of tall stature because the small races of southeastern Europe do not go to them in large numbers whereas Scandinavians and many Germans do.[62]

Clark Wissler correlated the average stature of the soldiers of various areas of the United States with the percentage of short-statured Italians and tall Scandinavians within the population of these areas. The coefficient of correlation with the percentage of the Italians was —.72, and with that of the racially tall Scandinavians, +.46. In other words, the greater the percentage of the racially short Italians among the population of a given area of the United States, the lower is the average stature of the population; the greater the percentage of Scandinavians in the population of a given area, the higher is the average stature of its population.[63] This hypothesis harmonizes with the results for average stature of the population of various parts of the United States found in the last army measurements, as well as in the previous measurements published by Gould and Baxter after the Civil War.[64]

One sees why the average stature of the soldiers from various states differed in the last measurement from the measurement of 1861–1864. In Illinois the average stature of the soldiers in 1861–1864 was 67.97 inches, while in 1917–1918 it was 67.40 inches, a decrease of .57 inches. In Ohio the decrease was .46 inches. These decreases are due principally to the influx of racially small immi-

[62] Charles B. Davenport and Albert G. Love, *Army Anthropology,* p. 105.

[63] Clark Wissler, "Distribution of Stature in the United States," *Scientific Monthly,* XVIII, 136 (1924).

[64] See J. H. Baxter, *Medical and Anthropological Statistics of the Provost-Marshal-General's Bureau,* Washington, 1875, I, 16 ff.; Benjamin A. Gould, *Investigations in the Military and Anthropological Statistics of American Soldiers,* New York, 1869, Tables I, II, III, IV, VII, and *passim.*

grants from southeastern Europe to those areas after 1870. The immigration of the racially tall Scandinavians to Minnesota after 1865 is the cause of an increase of .41 inches in the average stature of its population from 1864 to 1917.[65]

Finally, army anthropology corroborates the fact of greater variability in the stature of the urban population as compared with that of the rural population. The coefficient of variability for the stature of the urban population is 2.67, and for that of the rural population, 2.59.[66]

The hypothesis of Livi also explains satisfactorily both the greater variability in stature of the urban population as compared with the rural and the exceptions to this rule. Since the population of the city is recruited from other populations varying in average stature, it naturally exhibits greater contrasts in stature than the racially more homogeneous populations of rural areas, which, as we have seen, have a much more insignificant proportion of migrants from other places. This is the explanation of Livi's rule.

If we take, on the other hand, a wide rural area inhabited by two different races, the stature of the population may be more variable than that of the cities in a similar area. Hence there are some exceptions to the rule. The environmental factor is not excluded by Livi's hypothesis, but must be included in order to understand the differences in stature between the upper and lower classes, differences between children, and a number of other differences. When this environmental factor is added to Livi's hypothesis the results given for all substantial traits in the above factual data become comprehensible.

Summary.—The average stature of the country population as compared with that of the city population is greater in many countries and areas, less in several, and nearly equal in a few. The average stature of the agricultural class also compares with the average stature of the urban population in the same way.

In countries where the predominant native population is racially tall, as in England, the United States, Australia, and a few others, the rural population tends to be taller than the urban; in

[65] See the details in Charles B. Davenport, "The Mean Stature of American Males," *Journal of the American Statistical Association,* XVII, 484–487 (December, 1920). See also Aleš Hrdlička, *The Old Americans,* pp. 72 ff.

[66] Wissler, *op. cit.,* pp. 129, 143.

areas and countries with a racially short native population, as in Italy, the opposite is true. In countries where the native population is composed of different races, as in Russia, there is no consistency, and the picture is checkered. In one area the city population may be taller and in another area shorter than the population of the surrounding country. It is fallacious to claim that the country population is universally taller or shorter than the population of the respective cities, for such consistency does not exist. If all the countries studied are considered as a whole, the rural population is not shorter than the urban.

The data do not substantiate the claim that the city population, as a rule, grows or matures more rapidly or more slowly than the surrounding population. The data show that in some areas the city population matures more rapidly and in others more slowly and that, with some exceptions, the urban population shows more variability and greater contrasts than does the rural population.

The factors explaining the results of the studies on stature are partly environmental, but principally selective. Environmental factors, particularly food, that retard or quicken growth may explain some slight differences in the comparative stature of children in the city and children in the country, but environmental factors cannot explain the basic differences and similarities. Fundamental uniformities, or their absence, are accounted for satisfactorily in each case by the racial composition of the population, without regard for the factors determining this racial composition.

The theory of Livi regarding city and country selection is the most valid generalization in the field and explains the principal conclusions of the studies. The hypothesis that cities attract either tall or short persons by virtue of their tallness or shortness is insupportable. As yet we have no valid reason for believing that stature in itself is an instrumental factor in determining the place of habitation. The selective influence in the selection theory should be rejected. Similarly, there is no valid reason to claim, on the basis of the data concerning stature, that the city environment is either more favorable or more harmful to growth and stature than the country environment, and vice versa. Hypotheses of this kind are immature, fallacious, and contradicted by the data. Results may be obtained through the study of urban and rural popu-

lations from other standpoints, but the data concerning the stature of these classes of the population do not prove that cities or rural districts select the taller or facilitate better growth of stature, or that they select the shorter and stunt growth. These data show no uniformity in this field.

B. WEIGHT

The investigations of the comparative weights of the city and the country populations permit somewhat similar conclusions. We shall not repeat the data given in the *Principles* (pages 117–121), but merely present a summary of the situation.

A study of the comparative weights of city and country populations reveals no real consistency. In many cases the greater or smaller average weight of the city population as compared with that of the country is due to the racial composition of the urban and rural groups, whatever may be the causes of this racial composition. The weight of the country population, as a whole, seems to be somewhat above that of the city population. The tendency is not fixed, however, and there are exceptions. The principal cause of this difference is probably the difference in environmental conditions and not the selection of a racially heavier people by the country and a lighter by the city.

The index of weight of the city population has greater variability and shows greater contrasts than the index of weight of the country population. The causes of this are a greater range of contrasts in city environmental conditions and a greater racial heterogeneity than exist in the country population and environment.

C. BUILD

In the preceding paragraph, weight was discussed from the absolute or factual point of view. From various standpoints it is important to know the relation of weight to stature. Weight, considered in its relation to stature, may be styled "build." The index of build is computed according to various formulas. For instance, in the United States Army measurements of 1917–1918 the formula for build was

$$\frac{\text{Weight} \times 1{,}000}{(\text{Stature})^2} = \text{Build.}$$

In other studies the formulas are somewhat different.

Though data concerning the comparative indices of build are not very numerous, we feel safe in assuming that in countries where the stature of the rural population is lower than or equal to that of the urban population and weight is equal to or higher than that of the urban, the index of build of the rural population is higher than that of the urban population. In countries where the stature of the rural population is greater than and weight is equal to that of the urban, the urban index of build is higher. Finally, where the comparatively taller country population is also comparatively heavier, its comparative index of build may be equal to, lower, or higher than that of the urban. All depends upon the comparative stature and weight differences of the city and country populations.

D. CHEST CIRCUMFERENCE

The absolute and relative indices of chest circumference have some significance from the standpoint of health. We shall omit both the data and analysis of them, since these are given in the *Principles* (pages 122–125), and present merely a summary of the rural-urban differences in chest circumference.

Although the data do not show any consistent differences in the chest circumference of the two groups, the rural population, considered as a whole, seems to have a somewhat larger average chest circumference than the urban, not because of selection on the basis of chest circumference but because of environmental conditions, particularly fresh air and outdoor life. For an explanation of the comparative differences in chest circumference it is necessary to consider in each case the racial composition of the rural and urban populations. The greater variability of chest circumference in the urban population is due to greater racial heterogeneity and to greater contrasts in the urban environment as compared with the rural.

E. CEPHALIC INDEX

On the basis of their measurements Ammon, Vacher de Lapouge, Durand de Gros, and several other anthropometrists came to these conclusions: first, "the cephalic index of an urban population is lower than that of the country population around the city"; second, "in the regions where the brachycephalic type exists, it tends to concentrate in the country, while the dolichoce-

phals tend to live in the cities"; third, "the cephalic index of emigrants from a given country to the city or to another country is generally lower than that of the stay-at-home people of this country"; fourth and finally, "urban life tends to perform a selection in favor of the dolichocephals, and destroys or eliminates the most brachycephalic elements." [67]

Greater urban long-headedness was found by Durand de Gros in the districts and cities of Rodez, Millau, Espallion, Villefranche, and St. Affrique; by Ranke in Mannheim, Heidelberg, and Munich; by Ammon in Karlsruhe and Lörrach; by Vacher de Lapouge, Collignon, Huck, and Blind in Lodève, Clermont, Marshillargues, Paris, Lyons, Strasbourg, and a few other cities of France; by Weisbach in Vienna; by Oloriz in Madrid; by Röse in Dresden, Coburg, Gotha, and Nordhausen; and by investigators in other cities and the surrounding rural districts.[68]

These conclusions, however, were one-sided. A series of other studies covering an equal number of places either gave conclusions quite opposed to these generalizations, or else found no significant differences. Some of these studies were based on the populations of Montpellier and Nîmes, in France; other studies were conducted by Vacher de Lapouge in Malaga, Grenada, and other cities of Spain; and still others by Olechnowicz in Lublin, Russia. Those of Beddoe and Bradbrooke and Parsons in England and Scotland showed that the population of the cities was generally either more brachycephalic than the rural population, or approximately the same. According to Livi's study forty-one cities in Italy had average indices more dolichocephalic, and twenty-eight more brachycephalic than the indices of the population of the corresponding districts. Buxton reported no difference in indices in either Malta or Gozo. The rural population of Egypt was found by Craig to be generally more dolichocephalic than the urban. Similar conclusions were reached by Houzé for the ma-

[67] Georges Vacher de Lapouge, *L'Aryen, son rôle social,* Paris, 1899, pp. 412 ff., and *Les sélections sociales; cours libre de science politique professé à l'Université de Montpellier (1888–1889),* Paris, 1896, pp. 391 ff.; Otto Ammon, *Die natürliche Auslese beim Menschen,* pp. 72 ff.; William Z. Ripley, *The Races of Europe,* pp. 548 ff., 40–44. A lower cephalic index means greater long-headedness.

[68] For a survey of the studies and places see Ammon, *op. cit.,* chap. ii; Georges Vacher de Lapouge, *Les sélections sociales,* pp. 366–408; Ripley, *op. cit.,* pp. 544 ff.; C. Röse, "Beiträge zur europäischen Rassenkunde und die Beziehungen zwischen Rasse und Zahnverderbnis," *Archiv für Rassen- und Gesellschafts-Biologie,* II, 748–751, 794–796 (1905).

jority of the cities of Belgium and the Grand Duchy of Luxembourg; by Retzius, Hultkranz, Lundborg, Linders, Bryn, and Boas for many cities of Norway and Sweden; and by Ripley for a few samples of the population in the United States. The same conclusions were reached in the cases of some ancient cities.[69] The real situation is somewhat different from the theory advanced by the partisans of greater urban dolichocephalism; the data show that there is no uniformity.

There are few data dealing directly with the comparative variability of the cephalic indices in the urban and the rural populations. Nevertheless, the few existing measurements plus sound logic lead to the conclusion that, in spite of exceptions, variation is probably greater in the urban than in the adjoining rural population. Vacher de Lapouge found that in the urban population the index fluctuated from 72 to 91, while in the surrounding rural population it fluctuated only from 75 to 91.[70]

Ammon's study of the variation of the population of Freiburg draws similar conclusions.[71] Without denying the possibility of exceptions, we may tentatively assume that the variability of the cephalic index of the urban population is greater than that of the rural population. The proposition is still to be tested, however.

Interpretation.—We are reasonably certain that the cephalic index is determined primarily by race. The comparative urban

[69] In addition to the works of Vacher de Lapouge, Ripley, and Ammon, already cited, see John Beddoe, "Sur l'histoire de l'indice céphalique," *L'anthropologie,* V, 664–673 (1894); J. I. Craig, "Anthropometry of Modern Egyptians," *Biometrika,* VIII, 66–78 (1911–1912); E. Houzé, *Les indices céphaliques des Flamands et des Vallons,* Brussels, 1882; Herman B. Lundborg and F. J. Linders, *The Racial Characters of the Swedish Nation,* New York, 1926; H. Bryn, *Anthropoligia Norwegica,* Oslo, 1925, Vol. I; W. Olechnowicz, in *L'anthropologie,* VI, 702–703 (1895); F. G. Parsons, "The Cephalic Index of the British Isles," *Man,* February, 1922, pp. 19–23; Livi, *op. cit.,* Vol. I, chap. v; Niceforo, *op. cit.,* pp. 39–41; L. H. Buxton, "The Ethnology of Malta and Gozo," *Journal of the Royal Anthropological Institute,* LII, 183–184 (London, 1922); W. Bradbrooke and F. G. Parsons, "The Anthropology of the Chiltern Hills," *Journal of the Royal Anthropological Institute,* LII, 113–126 (1922); Franz Boas, *Primitive Art,* Oslo, 1927, p. 426; Karl Pearson, *The Chances of Death, and Other Studies in Evolution,* New York, 1897, I, 290 ff. Pearson was inclined to claim that "the dominating and most highly civilized peoples of the world fall into the brachycephalic portion of [his] table" and that they "are the more variable"—an assertion opposite to that of Vacher de Lapouge and Ammon. Retzius and Fürst, in *Anthropologia suecica,* chap. iv, say that extreme dolichocephalic, as well as extreme brachycephalic indices, are found among the industrial and urbanized, as well as the rural provinces. This is also true of average indices.

[70] Vacher de Lapouge, *op. cit.,* p. 404.

[71] For the data and the curves see Ammon, *op. cit.,* pp. 74–76. See also Charles S. Myers' paper in the readings to this chapter.

and rural cephalic indices in each case depend upon the racial composition of the respective populations, whatever may be the causes for racial distribution.

Livi's hypothesis in this field remains the most valid generalization. He very properly states that cities attract their migrants from more distant places than the surrounding country. Therefore, where the population near a city is of the dolichocephalic type, as in southern Italy, England, and Sweden, the urban population will be more brachycephalic because it will be composed not only of dolichocephalic migrants from the surrounding country but also of migrants from other more remote places with a brachycephalic population. The infusion of such brachycephalic migrants into the city population raises its comparative cephalic index. When the population of the rural district surrounding the city is predominantly brachycephalic, as is the case in many places in Germany, France, and northern Italy, the comparative index is reversed, and the urban index is more dolichocephalic than that of the surrounding country. Livi's analysis of the Italian population from this standpoint confirmed this hypothesis.[72]

It may be possible that the rural and urban environments in some way influence the cephalic indices of their populations. But we do not know whether this is true or not, and if it is true, we do not know what the character of this influence is. We can say nothing certain about it, and we cannot explain the rural-urban distribution of the cephalic index by the direct influence of environmental agencies.

F. SIZE OF THE HEAD AND CRANIAL CAPACITY

As far as we can judge from the existing data, there seems to be a slight but tangible correlation between intelligence and the size of head, or brain, or cranial capacity.[73] From this standpoint it is interesting to know the comparative size of head, weight of brain, or cranial capacity of the rural and the urban populations. Unfortunately, not enough data exist on these points to enable us to draw definite conclusions. The studies made by Ranke, Niceforo, Röse, Ammon, and a few others do not corroborate each other.[74]

[72] See Livi's paper in the readings. Other details are given in Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 129–132.

[73] See the data and literature in Pitirim A. Sorokin, *Social Mobility,* chap. x; Stanley D. Porteus and Marjorie E. Babcock, *Temperament and Race,* Boston, 1926, Part IV.

[74] See Sorokin and Zimmerman, *op. cit.,* pp. 130–131.

Neither do they permit any sweeping generalizations concerning differences in size of head between the rural and the urban populations or the existence of a positive or negative selective character in the migration from the country to the city. Nor do they permit sweeping generalizations concerning the negative or positive influence of urban and rural environments.

It is probable that the variability in size of head among the urban population is greater than among the rural population. This conclusion is warranted by the fact that in the urban population we find both the individuals with the largest heads or highest brain capacity—the intellectuals, professionals, and great men—and the individuals with the lowest brain capacity, the unskilled laborers.[75] Within the rural population contrasts are apparently not so great.

Summary.—There is no consistent tendency in the comparative cephalic indices of the urban and the rural populations. The same is true of the brain capacity, head size, and the weight of the brain of the rural and the urban population. Therefore the hypothesis of a generally greater dolichocephalism of the urban population is untenable. The urban population, however, seems to have a greater variability in cephalic index and in size of head than the rural population. The distribution of the cephalic index and size of head among the city and the country populations is due primarily to the racial composition of these populations.

There is no valid reason for the belief that the cephalic index or size of head plays an instrumental rôle in the distribution of individuals in the city and the country. In other words, we cannot claim that the urban or the rural population is selected on this basis or that the migration from the country to the city, and the reverse, is uniformly selective from this standpoint.

It is possible that the city and the country environments exert some influence upon the cephalic indices and the average size of head of their populations, but the hypothesis has not been proved as yet, and the character of the influence is unknown. At best, if the hypothesis is not entirely false, environmental influences are of secondary importance in this field. Race and migration explain satisfactorily nearly all the substantial facts found.

[75] See the data in Pitirim A. Sorokin, *Social Mobility*, chap. x.

G. PIGMENTATION

In connection with the Aryan theory, Vacher de Lapouge and others once maintained that the city population, supposed to be predominantly Nordic and dolichocephalic, was more blond in color of eyes and hair than the country population. A series of subsequent studies forced these authors to change their opinion and to agree that the urban population had a tendency to be somewhat darker than the rural. This theory of a darker urban population seems to be predominant now, and it is supported by many measurements. As proof of such a tendency we may mention the following investigations: studies of 760,000 school children by Georg von Mayr, and of 6,758,827 school children by Rudolf Virchow in Germany; studies by F. G. Parsons and John Beddoe, H. J. Fleure and T. C. James, John Gray, Peter L. McKinlay, and J. F. Tocher in the British Isles; studies of 256,166 recruits from Italy by Rodolfo Livi; studies by Gustav A. Schimmer in Austria; and studies by William Z. Ripley in the United States.[76] According to these studies the percentage of blonds is somewhat lower and the percentage of brunettes is somewhat higher in the city than in the country. Even in these studies, however, numerous exceptions are cited. Other studies have shown city populations to be either more blond than the country population or about the same. Hence, we are not entirely certain that the urban population, as a general rule, is really more brunette.[77]

Interpretation.—The color index of the population of a particular group depends primarily on its racial composition. For instance, the United States Army anthropology has shown that among the Irish and the Scotch stocks the proportion of blue

[76] See Rudolf Virchow, "Gesammtbericht über die von der deutschen anthropologischen Gesellschaft veranlassten Erhebungen über die Farbe der Haut, der Haare, und der Augen der Schulkinder in Deutschland," *Archiv für Anthropologie,* XVI, 275–475; Rodolfo Livi, *Antropometria militare,* Vol. I, chap. iv; John Gray, "Memoir on the Pigmentation Survey of Scotland," *Journal of the Royal Anthropological Institute,* XXXVII, 375–401 (1907); F. G. Parsons, "The Colour Index of the British Isles," *Journal of the Royal Anthropological Institute,* L, 159–182 (1920); H. J. Fleure and T. C. James, "Geographical Distribution of Anthropological Types in Wales," *Journal of the Royal Anthropological Institute,* XLVI, 151–152 (1916); Ripley, *op. cit.,* pp. 555 ff.; Peter L. McKinlay, "Anthropometric Studies of Glasgow School Children," *Journal of Hygiene,* Vol. XXIII (November, 1924); J. F. Tocher, "Pigmentation Survey of School Children in Scotland," *Biometrika,* VI, 130–235 (1908–1909); Gustav A. Schimmer, "Erhebungen über die Farbe der Augen, der Haare, und der Haut bei den Schulkindern Österreichs," *Mittheilungen der anthropologischen Gesellschaft in Wien,* Supplement I, 1884, Vienna, 1884.

[77] See the data in Sorokin and Zimmerman, *op. cit.,* pp. 131–140.

eyes is about 73 per cent; among the Polish and English, 66 per cent; while among the Hebrews and Italians it is 37 and 20 per cent, respectively. For this reason, if the population of one group has a high percentage of Scotch and Irish stock and another group is composed predominantly of Hebrews and Italians, the eye color index of the first would indicate much more blondness than would that of the second. With slight modifications, this holds for any groups compared. In some cases the city, and in others the country, population is more blond. Undoubtedly, the racial compositions of the various populations cause this difference.

Consider the fact that cities usually recruit their populations from much wider areas than does the neighboring countryside. This leads to the result mentioned many times—that in areas where the neighboring country population is predominantly blond the urban population tends to be darker, and where the rural people are predominantly dark the city population tends to be more blond. The reason has been discussed above. This expectation is corroborated inductively. In the West Country of England "where the nigrescence of the country folk is very high, the town people are fairer," according to F. G. Parsons, but in other parts of the British Isles, where the country people are predominantly blond, the city people are darker.[78] Similar facts in regard to their general forms have been found in Scotland by J. F. Tocher and in Italy by Rodolfo Livi.

In Scotland the correlation between the number of foreigners living in various country divisions and fair hair is —.788; medium hair, +.757; blue eyes, —.688; medium and dark eyes, +.523 and +.514. Therefore the deviation from the average in Glasgow, some other cities, and the densely populated parts of Scotland is due to a high percentage of foreign immigrants in these places. These immigrants, on the average, are darker than the population of Scotland. Their influx to the cities and densely populated areas tends to increase urban nigrescence.[79] (The correlation between number of foreigners and density of population in Scotland is +.9456.)

In those Italian provinces where the proportion of blonds is above the average percentage for all Italy, 21 urban-rural compari-

[78] Parsons, *op. cit.*, p. 179.
[79] Tocher, *op. cit.*, pp. 185–186, 229.

sons show city populations to be darker than the country, 1 shows them to be equal, and only 9 show them to be more blond. In 38 provinces having a greater proportion of brunettes than the national average the city population was more blond in 17 cases (a much higher proportion than in the provinces with a blond population), equal in 2 cases, and darker in 19.[80]

This same principle explains why, in Elissieff's sample of the Turkish population, the city populations were more blond, while in many cases in Germany, Austria, and France the cities sometimes have fairer and sometimes darker people than a neighboring country. To be sure, there are some exceptions to the rule, because, in addition to the factor of recruiting the city population from areas wider than the neighboring country, there are many other factors the total play of which sometimes masks the rôle of migration. Nevertheless, the expectation has been corroborated so often with such convincing evidence that Livi's principle may be taken as a general rule. This principle also explains why variability in pigmentation is likely to be greater in the city than in the country.

It is necessary to explain the alleged greater darkness in complexion of the city population. The authors who made this assumption tried to explain it in various ways. Some assumed that the cities attract more dark than blond individuals; others assumed that the brunette types have a greater chance of survival in an urban environment; and still others explained it on the basis of environmental conditions in the city. A careful analysis of these hypotheses shows that there is no valid evidence that the cities attract the brunette types predominantly or that brunettes show greater ability to survive in an urban environment.[81]

That the city population tends to be darker or lighter than the country population is still a mere assumption. If it is true, however, the environmental explanation is the most probable one. It is perhaps certain that the color of hair, and partly even of eyes, is influenced by air, sun, and other climatic conditions. In addition to these atmospheric and cosmic factors, purely social factors, particularly the use of cosmetics, may be relatively influential. We may conclude, therefore, that, as far as such a tendency really

[80] Livi, *op. cit.*, I, 70–72.

[81] See Sorokin and Zimmerman, *op. cit.*, pp. 136–140.

exists, the explanation probably lies in the environmental differences between the city and the country.

This discussion furnishes sufficient basis for the statement that the tendency of the city population to be darker is not firmly established; that the selective rôle of pigmentation in the shifting of rural migrants to the city is not proved; and that the greater vitality of the medium and the dark-complexioned individuals, as compared with the fair, is a mere assumption.

H. AGE OF PUBESCENCE AND MATURITY

Ammon and others expressed the opinion that the city environment facilitates earlier maturity of the human organism than does the rural environment. In their studies they present some data supporting their opinion. Ammon, for instance, found that the hair of the mustache and the beard of urban recruits developed one and one-half years earlier than that of rural recruits. This is also true of pubescent hair. The voice also matured earlier in the urban youth than in the rural youth. The migrants from country to city occupy, in these, an intermediate position between the full urban and the true rural youth.[82] The difference is ascribed by Ammon to differences in city and country environments. Niceforo, Brière de Boismout, Raciborsky, Leudet, and Meyer have expressed somewhat similar opinions, although their findings have shown only that menstruation appears somewhat later among peasant girls than among girls from the upper classes of the city. Comparisons with the girls of the urban labor classes have not shown any consistent tendency; in some cases the peasant girls, in others the working girls, matured later.[83]

Other investigations, however, have drawn opposite conclusions. For instance, the previously mentioned studies of Erich Peiper and Emil Schmidt in Germany, Bird T. Baldwin in America, and to some extent those of A. W. Tuxford and R. Ashleigh Glegg in England, have shown that the country youth matures somewhat earlier than the city youth. According to Bird T. Baldwin

> for the pubescent stages, the country boys range from nine and one-half to fifteen and one-half, with the mode at 13.5 [years], and the city boys

[82] Otto Ammon, *Die natürliche Auslese beim Menschen*, pp. 137–175.
[83] Niceforo, *op. cit.*, p. 30.

from 10 to 18, with the mode at 14. The country boys reach this period earlier than the city boys. . . . The girls from the country and from the smaller city (11,000 population) mature earlier than those from Chicago and New York, the median ages being, respectively, 13 years, eight months, 13 years, seven months, 13 years, nine months, and 13 years, nine months.[84]

This conflict of evidence does not permit any generalization. As the factors causing early or late maturity are not yet known exactly, it is probable that, as far as maturity is conditioned by environmental agencies, these may be present in the city in some cases and in the country in others. Besides, maturity seems to depend also upon racial characteristics; at least, several studies found such a relationship in regard to the age of menstruation.[85] This conflicting testimony may be due in part to the difference in the racial composition of the city and the country populations. However, we cannot make any generalization in this respect, either that the city population matures earlier, or vice versa.

I. GENERAL CONCLUSIONS

The preceding analysis summarizes the essential phases of the problem. Special summaries of the data have been given after each comparison of rural-urban differences in specific physical traits. The general conclusions that follow from this analysis are as follows: first, although there are some differences in the physical traits of urban and rural populations, they are not as conspicuous and uniform as may have been supposed; secondly, the total data in no way prove the greater physical poverty of the rural population as compared with the urban; thirdly, the data presented do not warrant the claim that any one of the physical traits studied is, in itself, instrumental in causing an individual to settle either in the country or in the city. In other words, we do not find any valid evidence that the cities either repulse or attract any particular physical type.

We have seen that all varieties of this theory of selective influ-

[84] Bird T. Baldwin, *The Physical Growth of Children from Birth to Maturity*, pp. 189–191.

[85] See, for instance, Eduard Krieger, *Die Menstruation*, Berlin, 1869, pp. 17 ff., 52 ff.; Howard A. Kelly, *Medical Gynecology*, New York, 1909, pp. 83 ff.; G. J. Engelman, "First Age of Menstruation on the North American Continent," Transactions of the American Gynecological Society, 1901, pp. 87 ff.

ence by the cities are based upon very slight foundations and are contradicted by the facts. Both the fact that the city population is recruited from more remote places than the rural population and the interpretation of Livi explain the differences much more satisfactorily than the hypothesis of selective influence. This factor, when it is supplemented by various environmental considerations, makes the hypothesis of any mysterious selective influence unnecessary. Hence the hypothesis formulated by many but especially well demonstrated by Livi remains the most important generalization in this field.

The readings for this chapter give some of the studies and theories discussed. The two selections from Vacher de Lapouge and Bertillon present the principal theories in the field and supply some data. The papers of Livi give his data and interpretations. The data presented by Myers depict the greater variability of the cephalic index in the urban population. Both the discussion and the readings outline the problems and put the reader *in medias res*. The bibliography is given in the footnotes throughout the chapter.

154. Georges Vacher de Lapouge: Urban Selection and Physical Traits *

Urban selection.—The cities take the highest type of individual from the neighboring countryside and attract, in proportion to their size, more immigrants from more distant regions. No one, in France at least, wishes to be a peasant; landownership is "too far away." Anyone who has a little initiative and intelligence seeks his living in the various forms of paid employment, or in business. Thus there results a growing world of parasites, functionaries, superfluous commercial representatives, and agents of all sorts. It is in the cities that we find the increasing crowd of those who aspire to produce nothing and to live well. Even individuals with high intelligence and education often fail because the supply exceeds the demand. Those with less ability strive to limit their desires; they engage in domestic service or they become public charges. In a country where the ability to read is rare the diffusion of primary instruction inevitably produces this species of madness. It is no less certain that this encumbrance will in the near future cause

* From Georges Vacher de Lapouge, "Sélection économique," *Les sélections sociales; cours libre de science politique professé à l'Université de Montpellier (1888–1889)*, Paris, 1896, chap. xiii, pp. 387–408.

a decrease in the number of city persons ill prepared for the battle of life, whereas the drainage of the more gifted will only become more complete.

The cities thus depopulate a large area of surrounding country by direct migration or in order to fill the gaps produced in the environs by previous migration. They attract the intelligent persons, but not exclusively, for there is room in the city for an unlimited number of laborers and domestics. Cities gather together not only valuable individuals but all those incomplete but usable persons, intelligent but lacking in energy or talent, who occupy a middle position between mediocrity and the superior complete man who is without equal in character and mental force. . . .

Urban morphology.—I am going to attempt to set forth the principal results of the study, which is well advanced today, on the morphology of urbanites. We will again observe a rigid connection between race and behavior.

Migrants to cities are morphologically no different from migrants in general. There is a racial contrast between urbanites and rural people wherever this contrast is possible. In England we will not find this contrast in striking form, for brachycephalics are nearly absent in that country. Migration to cities results in the concentration of dolichocephalics. This is explained by Ammon's law: "In regions where the brachycephalic type exists, it tends to be localized in the rural regions and the dolichocephalic in the cities."

The morphological difference between rural and urban residents appears to have been indicated for the first time by Durand de Gros in 1868 in the course of his vigorous polemics with Brocà on the influence of environment. [We refer to his work], *De l'influence des milieux sur les caractères de race chez l'homme et les animaux,* Paris, Baillière, 1868. [In a second study], "Une excursion anthropologique dans l'Aveyron," *Bulletin de la société d'anthropologie,* 1869, p. 193, he supports his theories, especially the one of "the dolichocephalicizing influence of the urban environment" with factual data. The table he gives . . . is the first published document on anthropo-sociology.

In 1881 the Russian doctor, Paul Jacoby, vigorously set forth in his *Études sur la sélection dans ses rapports avec l'hérédité chez l'homme* (Paris, Baillière, 1881) the intensity with which urban selection operated and the danger of this tendency for future civilization because of the concentration in cities of the most able individuals and their ensuing sterilization; but he does not appear to have understood the anthropological nature of that selection.

In his *Éléments d'anthropologie générale,* published in 1885, Topi-

DISTRIBUTION OF CEPHALIC INDICES AMONG THE POPULATION OF AVEYRON

	RODEZ *					MILLAU			ESPALION		VILLEFRANCHE			ST. AFFRIQUE	
	Rural		Urban			Rural		Urban			Rural		Urban	Rural	Urban
	Silicic Soil	Calcium Base	Average	Illiterate	Literate	Silicic Soil	Calcium Base	Illiterate	Valley	Mountain	Silicic Soil	Calcium Base	Illiterate		Illiterate
Subjects ..	72	45	27	9	18	8	19	5	17	14	22	10	2	35	6
Cephalic Indices..	85.76	86.50	83.19	83.96	82.78	85.83	85.77	84.15	85.25	85.25	88.19	88.57	75.52	83.40	82.21

* The ratio of cranial capacity of the literate rural and urban populations of Rodez is 2764/2910=95/100.

nard again sets forth the thesis of the morphological difference between rural and urban populations, this time with the true explanation of the phenomena.

> When Quetelet compared rural and urban populations in Belgium and found that the latter were taller, he did not yet realize there were two races in Belgium, that the shorter had sedentary and agricultural inclinations that held them in the country while the tall, blond, and dolichocephalic persons had migratory tendencies and initiative that impelled them to go to cities (p. 445). . . . Cities do not all have the same selective power. Some attract tall blonds who are animated with a spirit of enterprise, while other cities draw short brunettes. Thus the migrants from Savoy and from Auvergnot go to Paris and the Kabyles and M'Zabits [tribes in Algeria] to Algiers (p. 449, note).

Topinard gave no figures to support his views, not even those of Durand de Gros, of which he could hardly have been ignorant.

Cranial morphology of urban populations of the Grand Duchy of Baden.—The first study in which one finds both theory and data is *Anthropologische Untersuchungen der Wehrpflichtigen in Baden.* This work was published by Otto Ammon in 1890, and was the beginning of his scientific career. Ammon gave the following tables of percentages:

	Dolichocephalics (−80)		Brachycephalics (+85)	
Locality	Urban	Rural	Urban	Rural
Mannheim	43.4	34.8	10.4	14.5
Heidelberg	37.5	17.9	4.6	25.4
Karlsruhe	33.0	13.0	16.5	32.9
Lörrach	25.8	21.4	25.8	28.8

These data are quite clear: there are more dolichocephalics and fewer brachycephalics in cities than in rural regions. The smaller width of urban skulls proves that the excess of length is due to race and not to the influences of geographical environment, to the type of life, or to education. [The last statement is based on a part of the table not reproduced here.]

The theoretical interpretation of these facts is still doubtful. "What does this remarkable result mean? Does urban life render the head long and narrow, or is that function performed by better schools, or is there a hitherto unknown correlation between cephalic index and mental activity?" Ammon in his closing pages proceeded to set forth the hypothesis that concentration of dolichocephalics in the city raised

the cephalic index in rural districts. Dumont [in his work, published the same year], is more positive in this belief, even regarding the elimination of the dolichocephalics, and seems also to have grasped partly the particular attraction exerted on this group by the cities, but he failed to see the relationship of this to the psychology of races.

In his subsequent studies and in his *Auslese beim Menschen* Ammon is quite positive; and the proofs, tables, diagrams, and propositions supporting his statements occupy more than one hundred pages (62–175) of the *Auslese*. In this work he succeeds in demonstrating the real value of the researches on the morphology of urban populations, and, since this book appeared, Ammon's name has remained affixed to the law that he had set forth. Ammon is neither the first to have indicated the morphological difference between rural and urban populations nor the first to have admitted the selective influence of cities, but neither Durand de Gros nor anyone else had previously given a true picture of the importance of this selection.

It would be difficult as well as superfluous to reproduce the documents published by Ammon. His study, including thousands of individuals, is a collection of facts that cannot be briefly summarized. Those who would follow all the details of the question of urban selection ought to refer to it. I will limit myself to a presentation and an explanation of the summarized tables relating to the principal characters. That will suffice to give an understanding of the general process of selection exerted by cities.

Origin of Subjects	Cephalic Index
Karlsruhe	
Mean of the district	83.0
Baden immigrants	83.1
Non-Baden immigrants	82.5
Semi-urbanites	81.5
Urbanites	81.4
Born in Karlsruhe, father born in another city	80.2
Born in another city, father also	81.8
Born in city, father in country	80.3
Born in country, father in city	82.8
Freiburg	
Mean of district	83.6
Baden immigrants	83.0
Semi-urbanites	82.0
Urbanites	80.8

Both in Freiburg and in Karlsruhe we notice that the cephalic index, let us say cephalometric since we are dealing with living persons, is lower in the cities, a little higher among the semi-urbanites, and highest among the migrants. The mean of the district is greater than that of any of the other categories. The semi-urbanites are the conscripts born in the city of an immigrant father; the fathers and sons of the urban group were born in the cities. This takes no account of the mothers. If Ammon had required the urban filiation in the two lines, the urban indices found would probably have been still lower, but the number of subjects would have become small. The indices are low for the last four categories listed under Karlsruhe, which include conscripts in various situations who are all urbanites to some degree. The absolute length of the cranium is greater among the urbanites and semi-urbanites by a few millimeters, but the width is constantly less. This proves the racial rather than geographical or environmental origin of the difference. It is, even for the scientist, very suggestive to see that the destinies of men have depended upon two or three millimeters more or less in one of the two skull measurements. This is a relationship that produces a singular impression, but one to which the facts always bring us back.

The difference in mean index between the various categories depends chiefly on the unequal proportion of dolichocephalics included. This follows from the next table:

	Mean of the Duchy	Immigrants	Semi-Urbanites	Urbanites
Karlsruhe				
Index (—80)	12.2	14.9	25.9	33.3
Index (+85)	38.2	33.3	18.4	12.4
Freiburg				
Index (—80)	12.2	12.4	22.5	43.7
Index (+85)	38.2	31.3	27.7	14.8

Complexion.—The study of complexion reveals some very curious conditions. Urban attraction is perhaps a little more intense for dark dolichocephalics than for blond dolichocephalics. In Karlsruhe, and especially in Freiburg, we find a greater than average proportion of cases with hair and eyes of medium or darker shade. This excess is evidently due to a certain number of dark dolichocephalics; this fact deserves special consideration in view of the rarity of this type in the Grand Duchy of Baden.

Origin of Subjects	Color of Eyes				Color of Hair			
	Karlsruhe		Freiburg		Karlsruhe		Freiburg	
	Light	Other	Light	Other	Light	Other	Light	Other
Mean for the duchy	63.3	36.7	63.3	36.7	43.5	55.0	43.5	55.0
Mean for the district	56.6	43.4	65.6	34.4	31.7	67.4	23.5	66.2
Immigrants from the district	67.5	32.5	51.5	48.5	27.5	72.5	22.6	75.4
Immigrants from Baden	59.0	41.0	63.2	37.8	30.8	68.2	29.8	69.5
Immigrants not from Baden	67.7	32.3	...	...	38.1	60.3	...	...
Semi-urbanites	55.5	44.5	66.2	33.8	25.9	72.1	31.3	67.5
Urbanites	64.6	35.4	52.1	47.9	37.5	62.4	27.1	66.7

France and other countries.—This curious condition is repeated in an identical manner in France. My records for the cities of Aveyron confirm the definite difference pointed out by Durand de Gros. In Hérault, Montpellier presents a peculiarity that I shall consider directly, but the cities with smaller radii of attraction than this one verify the results found in Baden. Even the small cities of Lodève, Clermont, and Marsillargues, together with the data of Durand de Gros, have furnished examples of urban selection before the publication of *Anthropologische Untersuchungen* by Ammon. In Clermont and in Hérault the urban cephalic index is 79.5, the rural, 84.4; in Lodève, the urban is 79.7, the rural, 82.3. The average for the canton of Lunel is 83.3, while the two small cities of Lunel and Marsillargues yield the figures 82.1 and 81.3, respectively. The differences are a little greater than in the corresponding series for Baden; this is partly due to the greater purity of my series of urban data. I included only children both of whose parents were born in the city. The same explanation may no doubt be given for the marked differences found between urban recruits who were sons of natives of the city and rural recruits whose parents were rural in origin, in the canton of Rennes. . . . This type of study has not been carried on as intensively in France as it might have been. . . . The difference between urban and rural populations has already been noticed in Italy, Switzerland, and Austria; but no one has yet published any exact figures. In England, where brachycephalics scarcely exist, the studies made so far, which have been given by Beddoe, have yielded only negative results. This might have been stated a priori in view of the peculiar composition of the English population. In Spain the situation is the same. According to Oloriz persons in the city of Madrid give an average cephalic index of 77.8, while the index for the province of Madrid, excluding the capital, is

78.6. For Barcelona and its province the corresponding figures are 77.6 and 78.3; this is but a slight difference. It is true that Barcelona attracts many Languedocians from Provence and from northern Italy; and the index for these places is well above 80. Similarly Madrid receives many migrants from Galicia and Asturias for whom the index is in the neighborhood of 79 or 80.

The cephalic index is a satisfactory indicator wherever there coexist a dolichocephalic type and one derived from *Acrogonus*. Thus Elissieff, working among the Ottomans of Asia Minor, found 39 per cent of the indices below and 61 per cent above 80 among the rural population; the corresponding figures for the urban people were 44 per cent and 55 per cent. The dolichocephalic element is, in part, *Homo Europaeus,* for urbanites include 16 per cent of blonds and rural people 12 per cent, as compared with 65 per cent and 70 per cent of darker type. The other part is nearly identical with *Alpinus,* or, to be exact, with one of the forms of *Alpinus* in which is mixed a small part of blood of *Homo Asiaticus*. (R. d'Anthr., 1892, p. 481.) Monsieur de Ujfalvy kindly sent in some pages from a work in press that permit me to conclude that Ammon's law is applicable from northern Spain to Pamir. (See de Ujfalvy, *Les Aryens.*)

Knowledge of the causes operating to make the cephalic index of urban populations lower than that of the people in the surrounding regions permits us to state that we will find certain cities where the urban index will, on the contrary, be greater. Imagine a city situated in a dolichocephalic region but attracting migrants from a great distance. If it happens to assimilate a large number of individuals coming from a distant brachycephalic zone, it may be that this element, which is dolichocephalic as compared with the nonmigrants, will raise the urban average above that of the surrounding rural districts. This process is today operating in Montpellier, which is at the moment exactly in equilibrium with the surrounding communes—rural, 81.6 and urban, 81.6.

If one compares the distributions that we have published in *Matériaux,* one will observe the artificial nature of this equality of indices. The urban series composed of 99 cases extends from 72 to 91 and that of the 78 rural persons extends from 75 to 91. The second series is regular; the first has several discrepant items near the extremes. One will quickly see that the urban series includes an unusual proportion of marked dolichocephalics (70–74), characteristic of the urban element, and an excess of relative brachycephalics, who represent the migrant mountaineers. In fact, Montpellier draws more than two-thirds of its migrants from Aveyron, Lozère, and from the mountains of Gard and

of Hérault; one-fourth of the population has mountain blood. Migration to Cévennes exists also in the neighboring countrysides, but to a less degree. It is inevitable that at a given time the migrants with an index of 84 would end by raising the urban index above that of the rural districts. The skulls measured in the General Hospital and in Verdanson yielded means of 78.3 and 74.7, which for living persons would be equivalent to 80.0 and 76.5. For a century this situation has been developing.

We find the same condition in Nîmes as in Montpellier. In Spain, Valencia, which is a busy port and the capital of a province where dolichocephalism is prominent with an index of 76.88, itself has an index of 77.50. Similarly in Malaga where French immigration is important, the index increases to 79.32, whereas the rural index remains at 78.92. Granada reveals a similar condition, and the explanation is of the same nature. The cephalic index for Norway is approximately 77; the great number of foreigners in port cities increases the average. It is probable that the same would be true in certain places in England that receive a large proportion of immigrants from the continent.

Finally the facts that the dolichocephalics are more numerous [in the cities] and that the average [cephalic] index is lower among true urban persons than among sons of immigrants and especially than among immigrants themselves, prove that cities not only select dolichocephalics, but that the struggle for existence is more favorable for dolichocephalics. These facts are verified by the work of Ammon. . . . It must be remembered, of course, that these data [Ammon's] refer to conscripts who represent a random sample of the total population. The enormous difference between the figures for immigrants and semi-urbanites gives us an idea of the number of failures of those persons who die, or who are obliged to return to the country without making a success. Between the two urban categories the difference is ten times smaller. It is to be regretted that we do not have the data for semi-urbanites and the figures for urban women; the statistics would be of more value if they were complete. . . .

There is scarcely a more perplexing question than that of the drain on our intellectual reserves by urbanism. Officials and men of affairs do not doubt it. This is the great danger of modern societies and of France, in particular. Of all the scourges known as social selection—regressive selection—urban selection is the most intense. The result of plutocracy and of luxury, . . . *auri sacra fames* attracts our greatest men to cities. Urbanism destroys all that remains of intelligent and active persons after long centuries of disastrous selection. Nearly all

the dolichocephalic blonds have been lost in the past; the mixture of these and the best of the brachycephalics is now disappearing. The hour is approaching for France and for all of Europe when there will remain only the inert and dull débris of our dead nations, lamentable remains, which will be the prey of some sudden conqueror. Thus ended the Hellenic world; in the same fashion all of civilization will perish if men do not fully utilize the great force of heredity, which is today only a principle of death but which science, that modern Providence, can make the hope of life.

155. Jacques Bertillon: Stature in France *

With regard to stature France is divided into two distinct regions, which are separated by a line running from Manche to Savoy. Northeast of this line the average stature is high; to the southeast, on the contrary, the average is equal to or below the mean for all France. Brocá noticed this obvious difference and gave the following explanation. After studying the frequency of French military exemptions for insufficient height he admitted that "in general, the stature of the French (he is speaking only of them) depends neither upon altitude, nor latitude, poverty, wealth, type of soil, food, nor upon any of the other environmental conditions, which have been invoked as explanations. A single general factor should be recognized—racial heredity."

Brocà showed from history and especially from Caesar's *Commentaries* that racial heredity explained the presence in France of the two types of stature. . . . Brocà allotted a preponderant influence upon stature to racial heredity, but he did not deny that other factors could modify it. Two of these factors appear to me to have considerable influence, and they certainly might contribute to the explanation of the coexistence of two types of stature in the same region. They are: (1) the economic status of the population (*bien-être*), and (2) pathological conditions.

There are several countries in which there has been witnessed an increase in stature without the introduction of any new race. In Sweden, for example, stature is increasing, though racially this people has long been the same. Likewise, stature is increasing in the Netherlands. This fact is explained by the statisticians of this country as due to the draining of the marshes and an increase in general welfare. I do not press these examples too greatly. . . . The figures given above show, for Saxony, the extent to which an increase in welfare can raise the average stature. . . . This table is illuminating. The

* Jacques Bertillon, "La taille en France," *Revue scientifique*, 3d series, Vol. X, No. 16, pp. 481, 486–488 (October 17, 1885).

Number of Recruits per 100 of Each Occupation of Specific Stature, Saxony, 1852, 1853, and 1854

Occupational Group	Less than 1.557m.	From 1.557m. to 1.581m.	From 1.581m. to 1.604m.	From 1.604m. to 1.628m.	From 1.628m. to 1.652m.	From 1.652m. to 1.675m.	From 1.675m. to 1.699m.	From 1.699m. to 1.723m.	From 1.723m. to 1.746m.	From 1.746m. to 1.760m.	From 1.760m. to 1.783m.	Above 1.783m.	Absolute Number of Recruits Measured		
													City	Rural Districts	Total
Manual workers															
Peasants, farm laborers	15.38	6.65	11.23	13.98	13.86	13.06	10.36	7.02	4.36	2.24	1.20	0.66	962	15,787	16,749
Miners	18.28	8.16	12.53	14.20	14.88	10.52	8.97	6.38	3.56	1.26	0.63	0.63	376	1,364	1,740
Millers	12.00	5.71	11.18	13.99	16.14	12.91	11.26	8.36	5.05	2.40	0.75	0.25	228	980	1,208
Bakers	15.01	8.19	14.69	15.11	17.42	12.28	7.03	4.72	3.46	1.05	0.52	0.52	622	331	953
Butchers	11.28	5.95	9.38	14.95	14.84	13.94	11.79	7.22	5.32	3.30	1.27	0.76	415	374	789
Wine-shop keepers	13.76	6.42	11.01	11.01	18.35	17.43	11.93	3.67	2.75	2.75	0.92	0.76	89	20	109
Tailors	22.96	8.64	12.93	12.66	14.87	11.07	6.98	4.50	2.90	1.66	0.48	0.35	769	677	1,446
Shoemakers	21.91	7.21	11.28	14.66	14.34	11.00	7.78	6.48	3.18	1.14	0.65	0.37	1,658	797	2,455
Stocking makers	14.64	5.92	11.03	15.55	13.87	13.84	8.75	7.84	4.97	2.07	0.87	0.65	319	3,063	3,382
Bookbinders	19.10	9.55	15.17	13.48	17.42	10.11	7.30	4.50	2.25	0.56	0.56	0.65	154	24	178
Masons	7.98	6.16	10.26	13.30	16.27	17.93	11.70	7.22	6.08	2.20	1.29	0.61	307	1,009	1,316
Domestic servants	7.01	5.85	9.25	12.01	14.24	16.47	11.69	11.05	6.17	3.61	1.59	1.06	200	741	941
Furniture makers	15.14	7.83	10.67	15.75	16.57	13.72	8.94	5.29	2.64	2.13	0.61	0.71	578	406	984
Smiths	10.12	6.47	10.59	15.18	15.88	16.47	10.00	7.17	4.94	2.00	0.71	0.47	203	647	850
Ironmongers, nail-workers	24.50	9.80	14.71	15.70	8.82	9.80	5.88	5.88	3.92	0.98	0.71	0.47	68	34	102
Tin-plate workers	22.50	5.63	10.39	11.69	15.15	12.55	12.12	5.20	2.16	1.30	1.30	0.47	139	92	231
Weavers	15.88	6.70	11.84	14.80	15.74	13.20	9.24	5.97	3.68	1.67	0.80	0.48	3,055	3,583	6,638
Day laborers, drivers, porters	14.16	5.26	10.20	12.14	15.06	13.77	12.80	6.81	4.80	2.60	1.36	1.04	1,117	423	1,540
Workers in the professions															
Teachers, professors	4.37	1.45	8.25	9.71	17.00	10.68	15.53	15.05	7.28	6.80	1.94	1.94	84	122	206
Students	2.28	1.37	3.42	6.83	10.71	13.67	17.31	17.31	13.21	6.15	4.78	2.96	433	6	439
Pupils of seminaries	3.98	2.12	5.83	10.88	15.12	19.89	13.53	12.47	6.37	4.51	2.92	2.39	363	14	377
Booksellers	8.76	4.38	8.40	13.40	13.14	16.44	11.80	9.92	6.70	3.93	1.52	1.61	962	157	1,119
Total	....	...	....	....	....	....	....	...	...	...	...	...	18,613	33,805	52,418
Average	14.72	6.56	11.14	14.11	14.60	13.37	10.15	7.03	4.41	2.13	1.10	0.68	.....	.....	.....

only manual occupation correlated with high stature is that of servants, but this is often a necessity for engaging in this service. Many of this class also share from infancy in the comfort of their employer's household. All of the truly laboring groups, those in which one experiences want from early childhood—such as miners, earth-workers, shoemakers, tailors, and weavers, all of which are numerous in the industrial kingdom of Saxony, together with day laborers—include the majority of the smaller men. Students and commercial employes belong to another type.

To make the contrast more apparent we have placed all of the manual occupations in one group and the liberal professions in the other. . . . Although the average statures for the two groups are very different, 1.666 meters for the professions and 1.632, for the trades, their difference is less than that observed by us in the departments of northeastern France. . . . We summarize these results as follows:

1. Throughout northeastern France there are two types of stature, the taller of 1.69 meters and the other approximately 1.64 meters.

2. It is not impossible that the coexistence of these two types is due to the coexistence of two populations unequally fortunate, the one relatively rich and well-cared-for, the other not.

3. The true explanation of this fact is found in the theory of Brocà, who attributes it to the persistence of the two races composing the French nation. If one concedes this explanation to be valid, one will state that the Kymris, doubtless a conquering race, must have invaded Gaul along the courses of the large rivers, particularly along the Saône and the Loire. And it is literally true that the departments with the contrasting types of stature are those bordering on these rivers.

156. Rodolfo Livi: Occupation and Stature *

Why, and in what manner, do mountains exert an influence on human stature? Is it that mountainous soil is less fertile and thus less productive? Or is it due to the fact that mountainous regions are populated by people in poor economic circumstances whose bodily development is frequently retarded or modified by insufficient nourishment and an excess of hard work?

These questions necessitate some consideration of the influence of social conditions upon stature. In the second volume of this treatise we shall give data upon this subject in as complete a form as possible. Here we present the results of a study based upon the territorial divisions of 69 chief provincial cities, in which we compare the stature

* From Rodolfo Livi, *Antropometria militare,* Vol. I, Rome, 1896, pp. 46–51. This work is published by the press of Il giornale medico del regio esercito.

(1) of students, persons engaged in professions, employes, and so forth; (2) of peasants; and (3) of the remaining inhabitants.

The table following gives the stature of these three groups of people for the territorial divisions of Cuneo, Perugia, Aquila, Campobasso, Potenza, and Caltanissetta. These divisions have the highest elevation above sea level in the kingdom—537, 482, 721, 794, 823, and 588 meters, respectively.

Territorial Division	Students, Professionals			Peasants			Others		
	Number of Observations	Percentage with Stature of Less than 1.60 m.	Percentage with Stature of More than 1.70 m.	Number of Observations	Percentage with Stature of Less than 1.60 m.	Percentage with Stature of More than 1.70 m.	Number of Observations	Percentage with Stature of Less than 1.60 m.	Percentage with Stature of More than 1.70 m.
Cuneo	22	9.1	31.8	144	12.5	24.3	74	20.3	16.2
Perugia	27	7.4	37.0	540	15.2	9.4	325	11.7	20.9
Aquila	23	8.7	34.8	75	26.7	13.3	131	15.3	25.2
Campobasso.	26	8.7	38.5	158	34.2	2.5	91	25.3	6.6
Potenza	23	8.7	26.1	94	42.5	1.1	97	25.8	7.2
Caltanissetta	21	9.5	38.1	96	38.5	5.2	188	22.9	8.5

The stature of students in these divisions of high altitude is greater than that of peasants. The other occupational groups, composed, in general, of laborers and minor merchants, occupy an intermediate position. If mountains exercised any abstract influence upon stature, it should make itself felt upon students as well as upon the less favored classes. We may conclude that the lower stature of mountaineers is the product of social conditions, which are less favorable than those of the inhabitants of hills and plains.

If we examine in more detail the variations in stature and its correlation with social conditions we observe that the stature of students is greater than that of peasants in all of the 69 territorial divisions studied. These 69 territorial divisions were grouped according to the proportion of their total population that was of high stature. The table following gives the percentage of students of high and low stature for each of these groups:

Territorial Division Grouped According to Percentage of High Stature *	Percentage with Stature of				Number of Students of High Stature per 100 Peasants of High Stature	Number of Peasants of Low Stature per 100 Students of Low Stature
	Less than 1.60 M.		More than 1.70 M.			
	Students	Peasants	Students	Peasants		
29.6 and above	4.9	8.2	51.8	34.2	152	167
26.6 to 29.6	7.8	10.7	55.9	28.7	156	137
23.6 to 26.6	5.9	11.7	38.2	25.3	151	198
20.6 to 23.6	7.7	17.3	36.1	17.5	206	225
17.6 to 20.6	8.9	18.0	36.3	16.0	227	202
14.6 to 17.6	8.8	20.1	28.8	13.9	207	228
11.6 to 14.6	11.7	20.6	26.3	10.6	248	176
11.6 and less	10.4	30.1	24.1	5.7	423	289

* In grouping these we took 17.6 per cent as the basis because it represents the general proportion for the kingdom.

As we proceed from localities characterized by high stature to localities characterized by low stature we find that the stature of students also diminishes, but it always remains greater than that of the peasants. Columns 6 and 7 of the table above reveal that the difference in stature between students and peasants is more marked in localities characterized by low stature. In territorial divisions where 29.6 per cent or more of the population is of high stature, 34.2 per cent of the peasants are of high stature as contrasted with 51.8 per cent of the students. For every 100 peasants of high stature there are 152 students of high stature. In territorial divisions where only 11.6 per cent or less of the population is of high stature, 5.7 per cent of the peasants and 24.1 per cent of the students are of high stature. For every 100 tall peasants there are 423 tall students. Conversely, in territorial divisions characterized by high stature we find 167 short peasants for every 100 short students. Of the students 4.9 per cent are of low stature as compared with 8.2 per cent of the peasants. In those divisions characterized by low stature we find that there are 289 short peasants for every 100 short students; 10.4 per cent of the students are of low stature as compared with 30.1 per cent of the peasants.

This difference may be explained in two ways. It may be attributed

to more unfavorable conditions, especially in regard to nutrition, in which the peasants of southern and insular Italy (regions of low stature) find themselves, as compared with those in the regions of central Italy and the Po basin (regions of medium and high stature). This comparison serves to show us that an improvement of physical conditions is dependent, in great part, upon an improvement of economic and social conditions.[1] But it is necessary to remember also that the classes to which students and professionals belong are composed of a population that is migratory in nature. The peasants, on the other hand, are very much attached to their native locality. Thus, students represent a mixed type to which all of the racial types of the peninsula have contributed more or less. This we shall prove later in our discussion of the cephalic index. In the regions inhabited by tall races, as in northern Italy and Tuscany, students and professional classes represent an intermixture with the original short races. In regions inhabited by short races, as in southern Italy, these classes have intermingled with the tall races. The peasants in all regions of Italy have preserved their ethnic type more faithfully. If the upper classes were less migratory, the differences in stature between peasants and students would be greater in the provinces with high average stature and less in the

[1] Boudin, "De l'accroissement de la taille et des conditions d'aptitude militaire en France," *Recueil de mémoires de méd., chir., et pharm. milit.,* 3d series, 1863, Vol. X; and Brocà, "Sur la prétendue dégénérescence de la population française," *Bulletin de l'académie de médecine,* Paris, 1867, and *Mémoires d'anthropologie,* 1, 477, have already shown that the stature of the French recruits had increased in a marked manner from 1830 to 1860. More recently Dr. Carret, in "Étude sur les Savoyards," *Mémoires et documents publiés par la société savoisienne d'histoire et d'archéologie,* Chambéry, 1882, Vol. XXXI, showed on the basis of researches made on the documents of the Napoleonic levies that from 1811–1812 to 1872–1879, the stature of the Savoyard recruits had increased .6 centimeters. He explained this increase in terms of increased prosperity and better nutrition. R. Callignon, "L'anthropologie au conseil de revision; méthode de suivre," *Bulletins de la société d'anthropologie de Paris,* 1890, p. 767, also found an increase in stature in many divisions in the department of Côtes-du-Nord. Hovelacque and Hervé, "Recherches ethnologiques sur le Morvan," *Mémoires de la société d' anthropologie de Paris,* 3d series, Vol. V, found a similar increase in stature during the period from 1842 to 1890 in Morvan. Finally, Otto Ammon, "Die Körpergrösse der Wehrpflichtigen in Grossherzogthum Baden," *Beiträge zur Statistik des Grossherzogthum Baden,* N. F., Karlsruhe, 1894, Heft 5, found that the average stature of the recruits of Baden had increased a centimeter during the period from 1840 to 1864. The authors attribute this increase in stature to an increase in prosperity. The only comparative study of stature in Italy is that of A. Dessey, "Noterella di antropometria sarda," *Vita sarda,* Cagliari, 1894, periodico quindicinale, anno III, num. 16. The author compares the average stature of recruits from the classes of 1855–1859 with the average stature of those from the classes of 1865–1869 and finds for the province of Sassari that the average stature had increased from 1.597 meters to 1.610 meters. For the province of Cagliari he finds that the average stature had increased from 1.584 meters to 1.594 meters. Dessey, however, attributes the increase only to an increase in mobility and continental immigration.

provinces with low average stature. (See the preceding table.) If the upper classes were less migratory, and if the material conditions of the agricultural classes were similar in all parts of Italy, a graphic representation would show the lines for the upper classes and the peasants to be parallel.

157. Rodolfo Livi: Occupational Groups and Weight *

The average weight of 256,166 individuals was 60.5 kilograms. Since weight varies according to stature in the same way that chest measurement does, it is necessary to eliminate the influence of stature by comparing the average weight of each occupational group with the normal weight of individuals of the same average stature. The table following presents the results of such a comparison for various occupational groups:

Occupational Group	Average Stature in Meters	Average Weight in Kilograms		
		Actual	Normal	Difference
Students	166.9	61.0	61.8	−0.8
Small merchants	165.0	59.7	60.5	−0.8
Peasants	164.3	60.7	60.1	+0.6
Smiths	164.9	59.7	60.5	−0.8
Carpenters	165.1	59.7	60.6	−0.9
Masons	164.8	60.3	60.4	−0.1
Tailors, cobblers	164.4	58.6	60.2	−1.6
Barbers	164.2	58.5	60.0	−1.5
Butchers	165.7	61.4	61.0	+0.4
Cart drivers	164.4	61.0	60.2	+0.8
Bakers	164.7	60.8	60.4	+0.4
Laborers	164.4	60.5	60.2	+0.3
Various professional workers	165.0	60.3	60.7	−0.4

Below we give a list of occupational groups ranked from highest to lowest according to (1) stature; (2) actual weight; (3) the difference between the actual weight and the normal weight for individuals of their average stature.

It is evident that some occupational groups ranking low in regard to stature rank high in regard to weight, and vice versa, even though there is a closer anatomical relationship between weight and stature

* From Livi, *op. cit.*, I, pp. 66–68.

than between chest measurement and stature. The greatest diversity in any single occupation is found among students, for they have a relatively high average weight, only slightly less than that of butchers, while their average chest measurement is extremely low.

Stature in Meters		Actual Weight in Kilograms		Difference between Actual and Normal Weight in Kilograms	
Students	166.9	Butchers	61.4	Cart drivers	+0.8
Butchers	165.7	Students	61.0	Peasants	+0.6
Carpenters	165.1	Cart drivers	61.0	Butchers	+0.4
Small merchants	165.0	Bakers	60.8	Bakers	+0.4
Various professional workers	165.0	Peasants	60.7	Laborers	+0.3
Smiths	164.9	Laborers	60.5	Masons	−0.1
Masons	164.8	Masons	60.3	Various professional workers	−0.4
Bakers	164.7	Various professional workers	60.3	Students	−0.8
Tailors, cobblers	164.4	Small merchants	59.7	Small merchants	−0.8
Cart drivers	164.4	Smiths	59.7	Smiths	−0.8
Laborers	164.4	Carpenters	59.7	Carpenters	−0.9
Peasants	164.3	Tailors, cobblers	58.6	Barbers	−1.5
Barbers	164.2	Barbers	58.5	Tailors, cobblers	−1.6

158. Rodolfo Livi: Relationship between Occupation and Chest Measurement *

In order to study the relationship between occupation and chest measurement it is necessary to recall our discussion in chapter i concerning the relationship between stature and chest measurement. Chest measurement varies with stature in accordance with natural laws. The following table presents for various occupational groups, without regard to place of birth, the average stature, the average chest measurement, the normal chest measurement for the particular stature, and the difference between the actual and the normal chest measurement:

A comparison of occupational groups on the basis of the relationship of their actual to their normal chest measurement gives very different results from a comparison on the basis of stature alone. Students have a high average stature, but they, together with tailors and cobblers, are in an unfavorable position with reference to chest measurements. Peasants and cart drivers, on the other hand, have a low average stature but the highest average chest measurement as compared to their stature.

* From Livi, *op. cit.*, II, 58–59 (1905).

Occupational Group	Average Stature in Meters	Average Chest Measurements in Meters		
		Actual	Normal	Difference
Students	166.9	86.3	87.6	−1.3
Small merchants	165.0	86.2	87.1	−0.9
Peasants	164.3	87.5	87.0	+0.5
Smiths	164.9	86.5	87.1	−0.6
Carpenters	165.1	86.6	87.2	−0.6
Masons	164.8	87.1	87.1	0.0
Tailors, cobblers	164.4	85.6	87.0	−1.4
Barbers	164.2	85.7	87.0	−1.3
Butchers	165.7	87.2	87.4	−0.2
Cart drivers	164.4	87.6	87.0	+0.6
Bakers	164.7	87.2	87.1	+0.1
Laborers	164.4	87.2	87.0	+0.2
Various professional workers	165.0	86.9	87.1	−0.2

159. Rodolfo Livi: Social Conditions and the Cephalic Index*

The cephalic index, as we have already said, is a permanent characteristic. It cannot be modified by social or occupational conditions.

Ammon[1] studied the drafted men of the Grand Duchy of Baden, particularly those of Karlsruhe and Freiburg and the territory under their jurisdiction, and he discovered that peasants were more brachycephalic than urban people. He demonstrated that youths living in suburban territory and going to urban schools were less brachycephalic than the other peasants. Finally, he found a greater proportion of dolichocephalics among students in higher institutions than among those in secondary schools. From these facts Ammon concluded that the dolichocephalics, who are the descendants of the tall blond ancient German invaders, have a hereditary aptitude for the energetic life of the city. Since they possess a greater spirit of initiative, alertness, and so forth, they migrate more readily to the city. On the other hand, the brachycephalics are the descendants of the people, probably Asiatic in origin, who lived on Teutonic soil during the immigration of the Germans. Since they retain the characteristics of their ancestors, they have less aptitude for urban life and intellectual activity and a greater aptitude for agricultural life. The dolichocephalics still constitute the dictatorial class in modern Germany, while the brachycephalics consti-

* From Rodolfo Livi, *op. cit.*, I, pp. 86–92.

[1] Otto Ammon, *Die natürliche Auslese beim Menschen.*

tute the basis of the population. Since the cities increase in population much more rapidly than the country, and at the same time the great characteristic activity is consuming large numbers of lives, they must be replenished continuously from rural sources. In this process of replenishment mainly dolichocephalic individuals are attracted to the cities.

Vacher de Lapouge obtained results in France that were similar to those of Ammon.[2] His data from the departments of Hérault and Ille-et-Vilaine showed that the cephalic index of those who emigrated from one department to another was lower than that of those who did not.

We believed it would be interesting to use our own data to test these conclusions by determining whether these differences exist between our urban and rural peoples as well as between our upper and lower classes. We examined 69 of the chief provincial cities, together with their territorial districts, and compared the average cephalic index of each city with that of the province in which it is situated.

In 41 of the territorial divisions considered the urban cephalic index was lower than the average index of the entire province, while in 28 it was higher. At first glance this seems to support the contention that urban centers have a special attraction for the dolichocephalics. But before drawing this conclusion we divided the provinces into two groups, according to whether they had a higher or lower index than the average for the kingdom, 82.7. In the 38 provinces with an index higher than that of the kingdom, the index of the provincial cities was lower than that of the entire province in 29 cases, and higher in 9. In the 31 provinces with an index lower than the average index of the kingdom, the index of the chief provincial cities was higher than that of the entire province in 19 cases, and lower in 12. The contrast became even greater when we separated the more brachycephalic provinces (those with an average index at least two units higher than the average for the kingdom) from the more dolichocephalic provinces (those with an average index at least two units lower than the average for the kingdom). In the 22 provinces with an average index of 84.7 or more, 19 provincial cities had an index that was lower than that of the province, while 3 of them had a higher index. In the 18 provinces having an average index of 80.7 or less, 14 chief provincial cities had an index higher than that of the province, while 4 of them had a lower index. Thus, the urban centers of brachycephalic regions are less brachycephalic than the rest of the territory. The urban centers of

[2] Georges Vacher de Lapouge, "Recherches sur l'anthropologie de l'Ille-et-Vilaine," *Bulletin de la société scientifique et médicale de l'Ouest,* Rennes, 1895.

dolichocephalic regions are more brachycephalic than the rest of the territory.

It remains now to examine the phenomenon that urban centers tend to approach, in both brachycephalic and dolichocephalic regions, a mesocephalic type. It is our purpose to determine both the factors responsible for this phenomenon and the part of the urban population in which it is manifested most. For this reason we obtained the cephalic index in these 69 territorial divisions (a) of students, professionals, clerks, and so forth; (b) of peasants; and (c) of individuals in other social and occupational conditions.

In the table following the territorial divisions are classified into eight groups according to their average cephalic index. The proportion of students and peasants who have cephalic indices of 85 or above, and of 79 or less, is presented in the case of each of these several territorial groups.

Average Cephalic Index of Territorial Division	Percentage of Individuals with a Cephalic Index of 85 M. or More		Percentage of Individuals with a Cephalic Index of 79 M. or Less	
	Students	Peasants	Students	Peasants
85 or more	52.7	64.7	6.8	5.1
84 to 85	36.6	53.5	15.0	7.0
83 to 84	31.7	47.7	15.2	11.4
82 to 83	24.2	27.7	24.2	25.3
81 to 82	21.0	22.0	29.9	33.6
80 to 81	15.1	14.2	32.4	38.9
79 to 80	12.7	9.0	43.8	50.7
Less than 79	6.2	3.6	57.5	70.7

From this table we see that the cephalic index of the students in a province differs more from the average index of the province than does that of the peasants. The explanation for this fact must be sought in the greater mobility of the moderately rich classes as compared with the agricultural classes. In our discussion of the comparative stature of students and peasants we made this comparison of the mobility of the two classes mentioned above. Students are more dolichocephalic in northern Italy and more brachycephalic in southern and insular Italy, even when they are born in the city in which they live, because they belong to a class of the population that is ethnically less pure. Their ancestors from generation to generation have intermingled with

the foreign elements of the country. In addition, the parents of a great number of students and professionals born in the city were born elsewhere. Mobility is a phenomenon especially characteristic of these social classes.

The conclusion we draw from our investigation is that the cephalic index of the population of the urban centers of every region of Italy tends constantly to approach the general average of the Italian population. It tends to level itself continuously but very gradually, because this ethnic transformation is due to the intrusion of foreign elements even though they be in minor proportions.

Our researches in Italy do not confirm the conclusions obtained by Ammon and Vacher de Lapouge. The data of Ammon and Vacher de Lapouge showed that the dolichocephalic preferred the city and was attracted by the city. In Italy the brachycephalic as well as the dolichocephalic seem to be equally attracted by the city.

160. Rodolfo Livi: Urban and Rural Differences in Pigmentation *

In his famous study of German school children Virchow showed that the city as compared with the country had, relatively, a greater number of brunettes than blonds. The difference, however, was not great. The children of cities in northern Germany were much lighter in color than the children of either city or country in southern Germany. The greater darkness of the city population, however, was nearly constant in character. Virchow's data were gathered from over 24 centers of population, the data pertaining to suburban areas being distinguished from that pertaining to the city. In examining his data we found that only five areas showed the proportion of blonds in the city to be greater than that in the country. In three areas the proportion of brunettes was similar for country and city. In only one area was the proportion of brunettes greater in the country, while in the other twenty areas it was greater in the city.

It is our desire to see whether Italian data will corroborate the findings of Virchow. It is impossible for us to make an exact distinction between urban and rural populations because in our birth certificates the place of birth is indicated by the commune. The commune furnishes us with very little that can be used in making such a rural-urban distinction. Thus large cities, such as Alessandria, Lucca, Ferrara, Reggio, Emilia, and so forth, whose territory extends very far, have a rural population greater than or equal to that of the urban

* From Livi, *op. cit.*, I, 69–73.

population proper. We have compared, however, the proportion of blonds and of brunettes of 69 chief provincial city districts with that of the whole province in which the city district is located.

There are some chief provincial cities that have a greater proportion of blonds, and hence a lesser proportion of brunettes than the rest of the province. In the majority of the cities, however, the brunette type predominates over the blond type. The chief provincial cities less blond than the rest of the province are located in the regions of Italy that are more predominately blond. Similarly, the chief provincial cities that are less brunette than the rest of the province are located in the more predominantly brunette regions. To explain this phenomenon we must take into consideration the fact that immigration and emigration, with their continuous exchange, tend to level the ethnic differences in highly populated centers.

The 69 provinces were divided: first, into those above and those below the general average of the kingdom in their proportion of blonds (9.3 per cent for the whole kingdom); and second, into those above and those below the general average in proportion of brunettes (50.1 per cent). When the provinces were classified according to their comparative blondness, the proportion of blonds was greater in 31 provinces and less in 38. When the provinces were classified according to their comparative nigrescence, the proportion of brunettes was greater in 32 provinces and less in 37.

Of the 31 provinces in which the proportion of blonds was greater than that of the general average for the kingdom, there were 9 provinces whose chief cities had a greater proportion of blonds than the province; 21 provinces whose chief cities had a greater proportion of brunettes than the province; and 1 province in which the proportions were equal.

Of the 38 provinces in which the proportion of blonds was less than the general average for the kingdom, there were 17 provinces whose chief cities had a greater proportion of blonds than the province; 19 provinces whose chief cities had a greater proportion of brunettes than the province; and 2 provinces in which the proportions were equal.

Of the 37 provinces in which the proportion of brunettes was less than the general average for the kingdom, there were 10 provinces whose chief cities had a greater proportion of blonds than the province; 26 provinces whose chief cities had a greater proportion of brunettes than the province; and 1 province in which the proportions were equal.

Of the 32 provinces in which the proportion of brunettes was greater than the general average for the kingdom, we find 9 provinces whose

chief cities had a greater proportion of blonds than the province; 21 provinces whose chief cities had a greater proportion of brunettes than the province; and 2 provinces in which the proportions were equal.

Thus urban people are more brunette, both in populations that are predominantly blond and in populations that are predominantly brunette. This is perfectly in accordance with what we have already said in a previous article with respect to the differences in color between the mountaineers, plainsmen, and hill folk. The explanations that are given with regard to the difference in stature are also applicable to differences in pigmentation.

[The explanation is as follows:] The color of the eyes and hair is not an absolutely stable racial characteristic. Like stature, it may be influenced to some extent by environment and by acquired individual conditions. It seems to us that the same influences lowering the stature of mountaineers are instrumental in determining their greater blondness. The low fertility of the soil, the scarcity of industry and commercé, in addition to poor and difficult roads, produce a higher proportion of the poorer classes among mountaineers. Insufficient food, unhealthful living conditions, and excessive muscular work, especially during childhood, are factors that retard the natural development of the body, and through this, the evolution of the color. (Color becomes darker with physical maturity.) To these influences that affect the general development of the organism, we must add the local influences of respiration and the freshness of mountain atmosphere. Mountaineers are predominantly agriculturists, and, as such, they are exposed to the influence of air and soil, at least as much as any other occupational group. Hence the greater blondness of mountaineers is due to the fact that a greater proportion of them are exposed to the general and local influences that retard physical development and to the influences that directly produce lighter color. We cannot conclude from this, however, that the mountainous milieu has power to alter race. We know many races exposed for centuries to more radical changes of milieu, yet these races have not changed in any perceptible degree. The African negroes of North America, the Dutch Boers of South Africa, and the English in their various tropical colonies give evidence that environment does not affect the human race in any perceptible degree.

The modifications caused by mountain environment are limited, and they influence only individuals. They are not transmitted to posterity. This is also supported by the fact that the color of the mountaineers, compared with that of the population of the plains, is so little modi-

fied that the modification scarcely affects the typical color of each province, which is determined in its general character, as well as in its details, by the racial factor.

161. Charles S. Myers: Note on the Relative Variability of Modern and Ancient and of Rural and Urban Peoples *

In a paper published in the *Journal of the Anthropological Institute* (Volume XXXV, page 80) I have pointed out that the chief head measurements show approximately the same variability in the prehistoric people of Upper Egypt as in the modern population of the same region. One is led to conclude that age alone does not produce in a people increased heterogeneity.

There are at least two other instances that indicate a similar conclusion. They are published mainly in Professor Karl Pearson's *The Chances of Death and Other Essays* (Volume I, page 290). As they refer only to the cephalic index, I leave the comparison of other head measurements to my paper mentioned above.

I may add that the coefficient of variability is a hundred times the ratio of the standard deviation to the average, and that the standard deviation is the square root of the sum of the squares of the differences of the measurements from their mean divided by the total number of measurements:

$$\left(\sqrt{\frac{\Sigma d^2}{n}}\right)$$

Series	Cephalic Index		
	Number	Mean	Coefficient of Variability
Egypt:			
Prehistoric	139	72.99	3.83
Modern	136	74.13	4.10
Bavaria:			
Altbayerish	100	83.30	4.20
Modern	100	83.41	4.29
France:			
Ancient	36	78.36	5.67
Modern	56	79.79	4.81

* Taken from Charles S. Myers' article in *Man*, VI, 24–26 (1906). This publication is a monthly record of anthropological science published under the direction of the Anthropological Institute of Great Britain and Ireland.

In the same paper I have also pointed out how much more variable the inhabitants of a populous city are than those of country villages, and that in comparing communities of different regions or periods care must be taken to be sure that in this respect they are truly comparable. The following table shows the greater variability of townsfolk:

Series	Coefficients of Variability		
	Head Length	Head Breadth	Cephalic Index
Ancient Egypt.			
Kena peasants (Nakada, 8000–4000 B.C.)	3.11	3.29	3.83
Kena townsfolk (Thebes, 2000–600 B.C.)	3.54	...	4.46
Modern Egypt:			
Giza peasants (recruits)	3.08	2.83	3.33
Giza townsfolk (Cairo)	4.54	4.85	7.01
Modern Germany:			
Bavarian peasants	...	...	4.29
Bavarian townsfolk (Munich)	...	...	6.50
Modern France:			
French peasants	...	...	4.81
French townsfolk (Paris)	...	...	5.63

The data concerning prehistoric Egypt are extracted from Miss Fawcett's valuable memoir, *Biometrika,* Volume I, pages 408–467; those relating to France and Germany are given by Professor Karl Pearson (*op. cit.,* etc.). In some instances the probable errors of the coefficients must be high, owing to the small number of measurements within the series. But it is to be hoped that this note may induce others to study the relative variability of modern and ancient and of rural and urban peoples, and the various conditions affecting it.

CHAPTER XVIII

A COMPARISON OF THE HEALTH OF RURAL AND URBAN POPULATIONS

A. PRINCIPAL SOURCES

In the past the health and vitality of the rural and agricultural populations were probably much better than the urban. All the writers and thinkers of the past agree upon this point, as has been noted in chapters i and ii, which give their opinions with the facts whereon they are based. That mortality was higher, the birth rate lower, and morbidity greater in the city than in the rural and agricultural populations was unanimously accepted, as is shown in previous chapters and in Kohlbrugge's paper in chapter xix.

At present the unanimity of opinion is not so great, for, although a great majority of the investigators still think that the health and vitality of the rural populations are better than the urban, there are some who present opposing theories and claims. In view of this disagreement one must examine the relevant data carefully to arrive at a valid conclusion. These are numerous and varied, but they may be grouped into a few fundamental classes: first, data on the health of school children; second, data on the physical condition of recruits and various other urban and rural groups; third, comparative data on the health of various occupational groups; fourth, comparative data on longevity, mortality, and suicide in the city and the country, that is, among the agricultural and nonagricultural populations; fifth, data on the rural-urban distribution of specific diseases; and, sixth, data on rural-urban birth rates. The birth rate as well as the death rate is an important index of vitality. A consideration of these various data will give one a fairly accurate knowledge of the entire problem.

B. PHYSICAL EXAMINATIONS OF SCHOOL CHILDREN

These data are perhaps the most unsatisfactory of all sources, because many of the examinations are very superficial; moreover, investigators, even those who seem to be rather careful in the

actual examinations, rarely base their conclusions on random samples. Still more rarely are the rates standardized according to age, sex, and race. In spite of these and other important weaknesses and deficiencies in technique, we cannot ignore these studies completely, for they have some modest value.

I. PHYSICALLY DEFECTIVE SCHOOL CHILDREN IN THE UNITED STATES

We reject the data of Thomas D. Wood as invalid and largely fictitious,[1] though they are quoted widely—without verification[2]—by rural sociologists. Tables summarizing all the important investigations in this field follow. The first gives the percentage of physically defective children in various rural and urban schools.

Although these data relate to almost 1,800,000 children, no definite conclusions may be drawn from them as to conditions either in the city or the country. They show that the average health of the children of Philadelphia is slightly higher than that of the rural children of Pennsylvania, but the difference is insignificant and might result from the fact that the two studies were made at different times; the data for Philadelphia children are for 1922, while those for the rural children are for 1914. If both studies were for 1922, the conclusions would probably be different, because during the period from 1914 to 1922 there was a noticeable improvement in rural sanitation. The data for children of the city of New York indicate some inferiority to rural children, but in essentials the data for all the city and rural

[1] In his booklet *Health Essentials for Rural School Children* Thomas D. Wood fails to include the original sources of his table. He states only that "the table is based on the reports of over a half million children." Other writers quoting Wood's table make references to the reports of Thomas D. Wood of the National Education Bureau, to Volume I of *National School Service,* February 15, 1919, or to the Bureau of Education Bulletin No. 4, and so on. But when one checks these references, he finds either the same table reproduced without any further reference to its source, as in *National School Service,* or the report of Dr. Wood without the data. Some other authors—for instance, Paul L. Vogt, in *Introduction to Rural Sociology,* New York, 1922, p. 154—reproduce the table without any definite reference, describing it only as "recent investigations made by a committee of the National Education Association." They give no indication as to where it was published or upon what data it was based. However, from various sources we learn that Wood's table is based principally on data concerning children of twenty-five cities and children of Pennsylvania rural schools. The data for almost 300,000 of the rural children relate to children in Pennsylvania. Other rural districts of the United States are represented only in insignificant proportions: one county in Idaho, two counties in New Jersey, one county in Virginia, and one township in Massachusetts. Later we shall see that even in the data for these places the comparison has been so loosely made that the table has practically no value and may be disregarded entirely.

[2] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology,* New York, 1929, pp. 144–145.

schools of New York state show similar proportions of defective children. The villages alone seem to have a real superiority of health.

When we turn from these larger studies to numerous small local ones giving the nature and percentage of specific defects among urban and rural children, we find that the rural children are as healthy as the city children. See the data on pages 61 and 62.

PERCENTAGE OF PHYSICALLY DEFECTIVE CHILDREN IN VARIOUS RURAL AND URBAN SCHOOLS

PLACE AND TYPE OF SCHOOL	NUMBER EXAMINED	YEAR	PERCENTAGE DEFECTIVE
Pennsylvania rural schools [3]	469,199	1914–1915	71.5
Philadelphia schools [4]	230,528	1922	70.0
Schools of New York City [4]	294,754	1922	69.0
High schools of New York City [4]	1,671	1924	62.9
Schools in cities (10,000 and over) of New York state	595,206	1924	62.0
Schools in villages (4,500–10,000) of New York state	.....	....	55.4
Schools in rural communities (less than 4,500) in New York state [5]	.....	....	62.6
Eighty-nine rural county schools [6]	235,024	1926	63.0
New York City schools [7]	20,000	1908	75
			79.8

In addition, Elizabeth Moore found that among the country children of Missouri fifteen years ago there was generally a smaller proportion having dental defects and suffering from malnutrition than among city children of the same state and an approximately equal proportion with other defects. Taliaferro Clark, G. L. Collins, and Walter L. Treadway, in a study made at about the same time, found that the health of the rural children of Porter County, Indiana, was somewhat better

[3] *On Medical Inspection of 469,000 School Children in Pennsylvania,* Harrisburg, 1915, pp. 3 ff.; Report of the Pennsylvania Commissioner of the Health, 1915, pp. 283 ff.

[4] Thomas D. Wood and Hugh G. Rowell, *Health Supervision and Medical Inspection of Schools,* Philadelphia, 1927, pp. 260–261.

[5] William A. Howe, "School Medical Inspection in New York State," *American Journal of Public Health,* XV, 305–309 (1925).

[6] *Public Health Reports,* XLI, 2409 (1916). This is a weekly publication of the United States Health Service containing information on health conditions in the United States.

[7] Luther H. Gulick and Leonard P. Ayres, *Medical Inspection of Schools,* New York, 1908, p. 193.

Percentage of Specific Physical Defects Found among Preschool and School Children of Various States

I. City Children

Groups Examined	Defects of							Enlarged Glands	Malnutrition	Nasal Breathing	Year of Study
	Heart	Eyes	Teeth	Tonsils	Hearing	Nerves	Lungs				
City of New York: 294,754 school children [8]	1.3	11.3	59.1	15.0	0.7	1.3	0.1	?	15.8	12.8	1922
City of New York: 1,671 high school pupils [8]	6.7	24.3	26.7	12.0	0.4	2.9	4.1	?	19.8	3.7	....
City of New York: 1,061 preschool children [8]	?	?	59.2	40.2	...	...	...	?	29.7	38.2	....
City of New York: 20,000 children [9]	?	23.0–26.9	53.3	29.9	...	?	?	26.9	...	16.7	1908
Portland: 30,000 school children [10]	2.0	10.0	50.0	...	5.0	5.0	15.0	10.0	10.0	15.0	1913
Virginia: 14,803 rural and urban children [11]	?	14.0	63.0	70.0	1.5	?	?	67.5	5.5	?	1915
Missouri: 1,897 children [12]	...	...	52.0	...	...	...	...	...	10.0+	...	1922
Philadelphia: 230,528 children [8]	0.7	10.9	55.5	?	1.1	0.5	...	?	5.6	21.5	1922
University of Minnesota: 299 students from villages (50–1,000) [13]	13.0	11.4	81.0	36.1	16.4	?	5.7	?	28.8	6.7	....
University of Minnesota: 379 students from small cities (5,000–50,000) [13]	9.8	12.7	67.8	23.2	9.5	?	6.1	?	36.1	5.5	....
University of Minnesota: 837 students from large cities (50,000 and over) [13]	10.5	14.4	57.3	19.6	5.3	?	6.6	?	14.6	5.5	....

[8] Wood, *op. cit.*, pp. 260–261. [9] Gulick and Ayres, *op. cit.*, p. 195.

[10] Ellwood P. Cubberley, *The Portland Survey: A Textbook on City School Administration Based on a Concrete Study*, New York, 1916, p. 347.

[11] *Virginia Public Schools*, Richmond, 1919, p. 366. This volume contains the report of the education commission appointed in 1918 to make a study of the public schools of the state and that of the staff of experts under whom the survey was made.

[12] Elizabeth Moore, *Rural School Health Survey*, St. Louis, 1922, pp. 3–5.

[13] Harold S. Diehl, "Rural and Urban Health," *Journal of the American Medical Association*, LXXXIII, 1117–1123 (October 11, 1924).

PERCENTAGE OF SPECIFIC PHYSICAL DEFECTS FOUND AMONG PRESCHOOL AND SCHOOL CHILDREN OF VARIOUS STATES—*Continued*

II. COUNTRY CHILDREN

GROUPS EXAMINED	DEFECTS OF										
	HEART	EYES	TEETH	TONSILS	HEARING	NERVES	LUNGS	ENLARGED GLANDS	MALNUTRITION	NASAL BREATHING	YEAR OF STUDY
Elyria, Ohio: 2,229 school children [14]	?	6.4	28.8	8.4	3.1	...	...	...	3.7	...	1918
Grand Junction, Colorado: 1,510 pupils [15]	...	4.9	19.0	13.0	0.9	...	...	...	24.0	...	1922–1923
Pennsylvania: 469,199 rural school children [16]	?	17.9	?	26.2	3.3	?	?	4.9	?	4.9	1915
Bartholomew County, Indiana: 4,000 children [17]	?	?	38.67	14.0	?	?	?	?	?	?	1914
Virginia: 14,803 rural and urban children [11]	?	23.7	66.5	46.3	4.6	?	?	33.5	15.0	?	1915
Kentucky: 149 young children of a mountain country [18] (of no significance)	?	?	70.0	50.0	?	?	?	?	?	?	1922
Missouri: 1,897 rural and urban children [12]	?	?	45.0	?	?	?	?	?	10.0—	?	1922
University of Minnesota: 358 students reared on farms (selected group) [13]	12.3	7.3	66.5	23.5	12.6	?	6.7	?	25.2	3.7	1922–1923
Ohio: 212 pupils [19]	1.41	21.22	?	13.2	2.35	?	?	8.13	8.9	5.18	1914

[14] *Educational Survey of Elyria, Ohio,* United States Bureau of Education Bulletin No. 15, 1918.

[15] Marvin F. Beeson, "The Need of More Adequate Medical Examination of School Children in the United States," *Pedagogical Seminary,* XXX, 396 (1923).

[16] Report of the Pennsylvania Commissioner of the Health, 1915, p. 283.

[17] James A. Nydegger, "Rural Schools. Sanitary Survey of Schools in Bartholomew County, Indiana," *Public Health Reports,* XXIX, 352 ff. (1914).

[18] Lydia J. Roberts, *The Nutrition and Care of Children in a Mountain County of Kentucky,* United States Department of Labor, Children's Bureau Publication No. 110, 1922.

[19] Report to the Governor of Ohio by the Ohio State School Survey Commission, Columbus, 1914, p. 197.

than that of the city children.[20] Somewhat more recently Charles N. Leach and Kenneth F. Maxcy found that the typhoid fever morbidity in Alabama and other southern states was far lower in the rural districts than in the cities.[21] In Virginia rural school children had a much lower percentage of gland defects than city children (35.5 as against 67.5 per cent); of defective tonsils, adenoids, and whooping cough (65 and 74 per cent, respectively); of measles (48 and 74 per cent); of chicken pox (36 and 58 per cent); and of mumps (37 and 71 per cent). In regard to goiter, trachoma, and orthopedic defects, there were lower percentages among the city children in some cases and among the country children in others.[22]

II. CONDITIONS IN THE INDUSTRIAL AND RURAL AREAS OF ENGLAND AND WALES

Exclusive of the children of the well-to-do classes from the purely residential areas, the children from the rural districts of England and Wales, taken as a class, do not include a greater proportion of physical defectives than those from London and the industrial areas. The data for the examinations of recruits in Great Britain, to be presented later, support this conclusion. The table below, based on an examination made in 1920 of 746,411 school children of England and Wales, summarizes the situation.[23]

The data of other countries are few and permit no definite conclusions.[24]

We find that there is greater variability among city children both in health and in other traits. Among the upper classes in the city the health of the children is somewhat better than in the country, but among the lower classes it is somewhat poorer. The

[20] Public Health Bulletin No. 77, June, 1916, p. 80.

[21] Charles N. Leach and Kenneth F. Maxcy, "The Relative Incidence of Typhoid Fever in Cities, Towns, and Country Districts of a Southern State," *Public Health Reports,* Vol. XLI, No. 16, p. 705 (1926).

[22] Compare Leslie L. Lumsden, "The Physical Status of Farm Youth," *Rural America,* Vol. III, No. 3, pp. 10–11 (1927); and Taliaferro Clark, "The Need and Opportunity for Physical Education in Rural Communities," *American Physical Education Review,* Vol. XXIV, No. 8, pp. 437–443 (November, 1919).

[23] Annual Report of the Chief Medical Officer of the Board of Education, 1920, London, 1921, pp. 46 ff.

[24] See Blezinger, "Die vier ersten Jahre schulärztlicher Untersuchungen in Stadt und Bezirk Cannstatt," *Zeitschrift für Schulgesundheitspflege,* XVII, 433 (1904); Friedrich Prinzing, *Handbuch der medizinischen Statistik,* Jena, 1906, p. 95; and Sorokin and Zimmerman, *op. cit.,* pp. 147–148.

city shows greater contrasts because it contains classes at both extremes of economic position.

This discussion shows that we can draw only very indefinite and contradictory conclusions regarding the comparative health of rural and urban children from the data in the medical examinations of school children. We must pass, therefore, to a study of

PERCENTAGE OF RURAL AND URBAN CHILDREN OF FROM EIGHT TO FOURTEEN YEARS OF AGE IN ENGLAND AND WALES HAVING SPECIFIED DEFECTS

DEFECT	INDUSTRIAL AREAS	RURAL AREAS	LONDON
Uncleanness of head	8.2	7.3	18.96
Uncleanness of body	2.5	1.8	...
Malnutrition	3.8	4.3	1.1
Skin disease	2.4	2.6	1.8
Defective vision	14.5	9.4	11.7
Diseases of the eyes	2.0	2.0	3.1
Defective hearing	1.7	1.1	1.0
Diseases of the ears	2.1	0.9	2.0
Diseases of nose and throat	15.5	19.9	16.4
Enlarged cervical glands (nontubercular)	7.5	8.6	6.2
Defective speech	0.8	0.7	0.6
Defective teeth	23.9	23.6	23.4
Heart disease:			
organic	0.8	0.5	3.4
functional	1.3	0.9	...
Anaemia	2.2	2.8	4.1
Lung disease (nontubercular)	3.9	2.3	4.5
Tuberculosis:			
pulmonary			
definite	0.1	0.1	0.2
suspected	0.5	0.6	...
nonpulmonary	0.3	0.3	0.3
Diseases of nervous system	0.6	0.6	1.1
Deformities	2.7	3.0	3.0
Other defects	3.4	4.4	3.1

the more mature age groups. We must follow, so to speak, the careers of the children and observe them during the periods of adolescence and maturity.

Mature age groups are better material for studying comparative rural-urban health, because the majority of the diseases and defects of children are not very serious and either disappear or

increase in seriousness later; moreover, the physical examinations of children are usually rather superficial, and consequently diagnoses are often inaccurate. Maturity alone brings out the strength and weakness of children. Proceeding, therefore, to an analysis of the older age groups, those from 18 to 30, we find that the difference increases and becomes clearer. The data of the medical examinations of recruits and soldiers in the armies are very valuable.

C. MEDICAL EXAMINATIONS OF RECRUITS AND SOLDIERS

In spite of many deficiencies[25] the data of a medical examination of hundreds of thousands or millions of individuals constitutes a real health census of the population and various groups in it.

The medical examinations of military recruits and soldiers in Germany, England, the United States, and other countries show that the health of rural and agricultural recruits is better on the whole than that of recruits born, reared, and residing in cities.[26] Data for the period 1902–1913 show that in Germany the health of the country-born recruits engaged in agriculture was the best of all large classes studied; that of country-born recruits living in the city and of city-born recruits living in the country was next

[25] See Sorokin and Zimmerman, *op. cit.*, pp. 148–150.

[26] See Walter Claassen's paper in the readings. This problem has been discussed extensively in German literature. Most opinions and data, even of the period before 1903, corroborated Claassen's conclusions. However, several authors, especially Lujo Brentano and Robert R. Kuczynski, argued that the urbanization and industrialization of Germany did not lead to a decrease in its military power. Their arguments, however, shifted the emphasis from the question of the comparative military fitness of the rural and urban populations to the question whether the military power of Germany as a whole was impaired by industrialization and urbanization. They indicated that industrialization and urbanization made possible a greater increase in population, in the financial resources of the Empire, and so on. They claimed that as a result the military power of Germany as a whole had been increased. Whether or not this claim is true, it is easy to see that the issue involved is not the comparative health and military fitness of the rural and urban population within Germany. The authors themselves recognized that the military fitness of the agricultural population in Germany was better than that of the urban population. After all his arguments, Kuczynski acknowledged that *im grossen und ganzen erscheint allerdings eine etwas ungünstigere Stellung der Industriebevölkerung in ihrem Durchschnitt wahrscheinlich.*

For further discussion and relevant literature see Lujo Brentano and Robert R. Kuczynski, *Die heutige Grundlage der deutschen Wehrkraft,* Stuttgart, 1900, p. 112. See also Robert R. Kuczynski, *Der Zug nach der Stadt,* Stuttgart, 1897; Prinzing, *op. cit.,* pp. 233–244; the important studies of Sering, Bindewald, Abelsdorf, Sohnrey, and Ballod; and other literature cited in these studies. Adna F. Weber, in his excellent mono-

best; while that of recruits engaged in industry who were born, reared, and residing in the city seemed to be much poorer. The recruits born in Berlin and engaged in industry had the poorest health of all groups.

The medical examinations that were given some two million recruits and soldiers in England during 1917 and 1918 showed that the English agricultural class, predominantly a rural class, was conspicuously superior in health to the urban and industrial populations generally. The health of only a very few groups, the miners, for instance, rivaled that of the agriculturists. The results of other studies of the health, mortality, and morbidity of the rural and urban population in England agree with the data of the army examination, as seen in the report in the readings.

Similar conclusions drawn from the medical examinations of recruits in America and the United States Army were reached by J. H. Baxter, who gave data on 910,652 soldiers and recruits during the period 1864 to 1866;[27] Surgeon-General Merritte W. Ireland, who gave data for 1917 and 1918; and Albert G. Love and Charles B. Davenport, who furnished data based on the examinations of about 2,800,000 men during the World War. The principal data of Baxter's examination appear in the table below.

Among the 76 occupational groups studied, the number of rejected farmers occupied the thirteenth place from the bottom

graph on *The Growth of Cities in the Nineteenth Century: A Study in Statistics,* New York, 1899, makes the same mistake in his interpretation of the evidence of Kuczynski and Brentano as did these authors themselves. See also Walter Claassen, "Die abnehmende Kriegstüchtigkeit im Deutschen Reich in Stadt und Land von 1902 bis 1907," *Archiv für Rassen- und Gesellschafts-Biologie,* VI, 73–77 (1909); VIII, 786 (1911); X, 584 (1913); Hugo Meisner, "Rekrutierungsstatistik," *ibid.,* VI, 59–72; Walter Claassen, "Die Einfluss von Fruchtbarkeit, Sterblichkeit, etc.," *ibid.,* VIII, 483–492. For a criticism of Claassen's conclusions see Alfons Fischer, "Zur Beeinträchtigung der Kriegstüchtigkeit in Deutschland," *ibid.,* VII, 174–179. This criticism, however, does not concern the difference found between the military fitness of the rural-urban categories; see the answer of Claassen, *ibid.,* VII, 180–187. For other data see *ibid.,* X, 618 ff., and Richard Thurnwald, "Stadt und Land im Lebensprozess der Rasse," *ibid.,* I, 871–878. For the past see Ernst Engel's data in the *Zeitschrift des statistischen Bureaus des Königlich sächsischen Ministeriums des Innern,* 1856, Nos. 4–7, pp. 61, 111, 112; Hugo Meisner, "Einfluss der sozialen Lage auf die Militärtauglichkeit," *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, Munich, 1913; Prinzing, *op. cit.,* 237 ff.; Robert R. Kuczynski, "Heeresergänzungsgeschäft," *Statistisches Jahrbuch deutscher Städte,* Leipzig, 1907 and 1908; and A. Korff-Petersen, "Die Wohnung als Grundlage der Gesundheitsfürsorge," *Handbuch der sozialen Hygiene und Gesundheitsfürsorge,* ed. by A. Gottstein, A. Schlossmann, and L. Teleky, Vol. V, Berlin, 1927, p. 204. (The volumes of this publication are cited hereafter as the *Handbuch der soziale Hygiene.*)

[27] J. H. Baxter, *Medical and Anthropological Statistics of the Provost-Marshal-General's Bureau,* Washington, 1875, Vol. I.

of the table—a lower position than that of 63 other occupational groups. Only blacksmiths, printers, ironworkers, boatmen, firemen, miners, sailors, and soldiers had smaller percentages of rejections, and the occupations of most of these groups were more rural than urban in nature. Most of them, moreover, were selective on a basis of physical strength; and finally, they were too few in numbers to be representative. We may conclude, therefore, that

DATA ON DISEASE IN ITS RELATION TO OCCUPATION: COMPILED FROM UNITED STATES ARMY, CIVIL WAR PERIOD

CLASSES OF OCCUPATION	NUMBER EXAMINED	NUMBER REJECTED PER 1,000
All occupations	334,321	366.761
Professional	7,576	520.063
Mercantile	18,818	479.541
Skilled	75,761	433.957
Agricultural	137,425	349.871
Unskilled (including farmers)	232,166	347.919

the farm recruits, exclusive of these few small specially selected and predominantly rural groups, had in general the best health.[28]

For nearly all such diseases as syphilis, phthisis, pulmonalis, disorders of the intellect, diseases of the circulatory system, diseases of the digestive system, and obesity, the farmers had a rate of rejection below that of the whole army. For paralysis and diseases of the nervous system the rate among farmers approached closely the average of the nation, but for chronic rheumatism it was slightly higher. For some diseases, such as syphilis, the rate among farmers was lower than that in any other of the 76 occupations studied.[29] The examination of Civil War recruits revealed that the farmer class had better health than practically all other large occupational classes in the United States.

Among several serious deficiencies in the data of the recent medical examination of the United States Army during 1917 and 1918 especially important is the disagreement of the data given

[28] *Ibid.*, Chart XXXIV, pp. lxxv, 3, 7, 49, 72, 85 ff.
[29] *Ibid.*, Charts XXV–XXXIII.

in the various reports of the examination.[30] We shall omit any discussion of the deficiencies and merely present the essential figures. According to the provost marshal general, the percentage of men rejected as being unfit for military service was 21.68 among all urban recruits and 16.89 among all rural recruits.[31] According to Surgeon-General Merritte W. Ireland, the percentage was 23 in the city and 20 in the country.[32] According to Albert G. Love and Charles B. Davenport, the percentage of accepted recruits without defect was 61.74 among the urban and 66.74 among the rural recruits; the percentages of accepted recruits with defects were 33.49 and 28.30, respectively; and the percentages of recruits rejected were 4.77 and 4.96, respectively.[33] Despite the discrepancies in the figures of these different investigators, discrepancies due partly to the number of men examined and partly to differences in the methods of computation, all the data agree that the rural population had better health on the average than the urban.

This conclusion is consistent with the comparative proportion of physical defects found among the rural and urban recruits, as well as with the ratio of defects found in predominantly agricultural and predominantly industrial regions of the United States:

> For the whole United States there are found 557 defects per 1,000 men examined. For rural districts alone the rate is 528, and for urban districts (cities with 25,000 and more population) alone it is 609; that is, fewer defects were noted in registrants from rural than from urban districts. Part of this excess of defects in cities is probably due to the more critical examination by the physicians of cities.[34]

That the agricultural population has better health than the urban is corroborated further by the geographical distribution of defects among the predominantly agricultural and the predomi-

[30] See Rufus S. Tucker, "Distribution of Men Physically Unfit for Military Service," *Journal of the American Statistical Association,* XVIII, 377–384 (1922).

[31] Second Report of the Provost Marshal General, 1919, p. 159.

[32] Merritte W. Ireland, "Physical Defects Discovered in Selective Draft Men during the World War," *Journal of the American Medical Association,* LXXIX, 1579 (November 4, 1922).

[33] Albert G. Love and Charles B. Davenport, *Physical Examination of the First Million Draft Recruits; Methods and Results,* War Department, Office of the Surgeon-General, Bulletin No. 11, March, 1919, p. 121.

[34] Albert G. Love and Charles B. Davenport, *Defects Found in Drafted Men,* War Department, 1920, p. 348.

nantly manufacturing sections of the country. "The agricultural groups thus show fewer defects than the manufacturing, commercial, and mining groups."[35]

On the basis of these data we conclude that the health of the rural population was conspicuously better than that of the urban in the years from 1864 to 1866; and that the rural health still continues to be better, although the contrast in 1917 was less conspicuous than in the period from 1864 to 1866.

The situation in Holland in 1924 is shown by the table below.[36]

PERCENTAGE OF RECRUITS UNFIT FOR MILITARY SERVICE IN COMMUNITIES OF VARIOUS SIZES IN HOLLAND, 1924

SIZE OF COMMUNITY	PER CENT
5,000 or less	16.59
5,000–20,000	18.67
20,000–50,000	18.14
50,000–100,000	19.92
100,000 or over	22.13
Country as a whole	19.02

When the causes of unfitness were analyzed, the recruits from the communities of 5,000 population and less were found to include a lower percentage of defectives of all types—sufferers from anemia, debility, hemorrhoids, lung and heart diseases, defects of the eye and the ear, mental diseases, scrofula, and foot defects. The only exception was hernia.[37]

We have only incomplete data for other countries, partly because of a general lack of data in this field and partly because of the impossibility of securing the original sources. In a study of Swiss recruits for the period from 1885 to 1891 Dr. C. Heers[38] found the percentage of recruits fit for military service to be 62.1 in the agricultural occupations as compared with 62.8 in the industrial occupations—a difference practically insignificant. In

[35] *Ibid.*, p. 280; see especially charts and tables.
[36] *Annuaire statistique des Pays-Bas*, 1927, p. 40.
[37] *Ibid.*, pp. 40–41.
[38] C. Heers, *Beitrag zur Kenntnis der Recrutierungsverhältnisse der landwirtschaftlichen und industriellen Bevölkerung der Schweiz*, Schaffhausen, 1897. This study has many defects in method.

general the military fitness and health of the agricultural recruits was about that of the average of the whole group studied. From the qualitative standpoint there was no marked difference between the kind of defects found in recruits from areas predominantly agricultural and those predominantly industrial.

The total data indicate clearly that as a rule the health of the rural recruits is somewhat better than that of the urban recruits.

D. DISEASES OF THE CITY AND THE COUNTRY

Another source for the study of the comparative health of city and country populations are the statistics for the occurrence of various diseases among the rural and urban populations of all ages and both sexes. We shall not repeat the data given in the *Principles* and the readings but, after carefully weighing them and supplementing them by other data not given there, we shall summarize the conclusions derived from all the data.

I. TUBERCULOSIS AND DISEASES OF THE LUNGS

These diseases have been predominantly urban. There were 78 cases of tuberculosis among the rural recruits in America to every 100 among the urban.[39] The rate among farm recruits in the army of 1864 also was lower than that among all occupations taken together.[40] Louis I. Dublin found the proportion of deaths from tuberculosis of the lungs to be 20.5 per cent in all the occupations studied, and 9.7 per cent among farmers. Miners alone had a lower percentage than farmers, but all other occupations were much higher.[41] Even the crude death rate from tuberculosis of all forms is higher in the cities of the United States than in the rural districts (communities of less than 10,000 population). It must be remembered that from any crude rate only inadequate conclusions may be drawn, more favorable to the city than is actually the case. The crude rates of the rural and urban population for the period from 1918 to 1923 inclusive are as follows:[42]

[39] Love and Davenport, *op. cit.*, p. 353. See also Sorokin and Zimmerman, *op. cit.*, pp. 157–159, and the reading from Teleky in this chapter and that from Stevenson's report as registrar-general for England and Wales in the next chapter.

[40] Baxter, *op. cit.*, Vol. I, Chart XXVII.

[41] Louis I. Dublin, *Causes of Death by Occupation*, United States Bureau of Labor Statistics Bulletin No. 207, March, 1917, pp. 8, 37.

[42] United States Bureau of the Census, *Mortality Statistics*, 1923, p. 37.

TUBERCULOSIS DEATH RATE PER 100,000 POPULATION IN THE UNITED STATES, 1918–1923

POPULATION GROUP	1923	1922	1921	1920	1919	1918
Cities in registration states	93.9	97.7	100.9	118.5	133.5	164.2
Registration cities in nonregistration states	141.6	161.2	161.5	176.7	160.9	206.2
Rural parts of registration states	91.9	94.6	95.9	108.1	117.3	134.9
All registration cities	95.3	99.5	103.0	120.4	134.8	166.1

Similar data are available for the city of Quebec, for Italy,[43] and for many other countries.

TUBERCULOSIS DEATH RATE PER 10,000 POPULATION IN ITALY, 1921–1923

POPULATION GROUP	PULMONARY	OTHER FORMS
Eighteen large cities (100,000 and over)	15.7	4.1
Italy as a whole	10.8	3.3

In England and Wales for the years from 1910 to 1912, of the eight social classes the agricultural class had the lowest rate of mortality from tuberculosis and diseases of the respiratory organs among males 25 to 65 years of age.[44] The rate given in previous British censuses was very much more favorable to agriculturists. The rural-urban contrast is not so great among females, but the rate was higher in the urban than in the rural population in all the female age groups for which statistics are given.[45] When we consider the comparative death rates from tuberculosis in the

[43] Statistical Yearbook of Quebec, 1926, p. 88; *Annuario statistico italiano,* 1922–1925, Rome, 1926, pp. 47–49; Ugo Giusti, *Le grandi città italiane,* Florence, 1925, p. 22.

[44] See the Supplement to the Seventy-fifth Annual Report of the Registrar-General for England and Wales, 1912, Part IV; T. H. Stevenson, "The Social Distribution of Mortality from Different Causes in England and Wales, 1910–1912," i, ii. *Biometrika,* XV, 383 ff. (1923); and Arthur Newsholme, *The Elements of Vital Statistics in Their Bearing on Social and Public Health Problems,* London, 1924, chap. xxxviii. For 1921–1923 see the reading in the next chapter from the report of Stevenson as registrar-general.

[45] See Edgar L. Collis and Major Greenwood, *The Health of the Industrial Worker,* London, 1921, pp. 129–135; Austin B. Hill, *Internal Migration and Its Effects upon the Death-Rates: with Special Reference to the County of Essex* (Privy Council, Medical Research Council, Special Report Series, No. 95), London, 1925, pp. 1–78.

urban and the rural districts of England and Wales we find the rural rates to be far below the urban.[46]

The mortality from tuberculosis in Austria has also been greater in the cities. The table below gives the death rate per 1,000 population in Vienna and in the rest of Austria.[47]

TUBERCULOSIS DEATH RATE PER 1,000 POPULATION IN AUSTRIA, 1913 AND 1923

SECTION OF THE COUNTRY	1913	1923
Vienna	2.88	2.48
Lower Austria	2.53	1.80
Upper Austria	2.56	1.94

The data for Germany and other countries are similar.[48] In Bavaria in 1908 the number suffering from tuberculosis per 10,000 individuals engaged in specific occupations was 23.9 among the professions; 41.3 in industry, trade, and transportation; and 15.5 in agriculture.[49] In Switzerland the rate of mortality from tuberculosis in the agricultural population was the lowest of all occupational groups studied.[50] In Holland in 1924 the rural recruits included a smaller percentage afflicted with lung diseases than the urban.[51] The data on other countries are similar.[52] When the data are standardized according to age and sex, and when all the age groups are taken, the country population appears to have a lower rate of tuberculosis than the city.

Although in some cases a few age groups in the city, usually

[46] See the Eighty-second Annual Report of the Registrar-General for England and Wales, 1919, London, 1920, p. xxvii.

[47] *Journal de la société de statistique de Paris,* 1926, p. 295.

[48] M. Mosse, "Einfluss der sozialen Lage auf die Tuberkulose," *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, pp. 558 ff.

[49] Franz Koelsch, "Arbeit bezw. Beruf in ihrem Einfluss auf Krankheit und Sterblichkeit," *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, p. 179.

[50] Friedrich Prinzing, *Handbuch der medizinischen Statistik,* pp. 481 ff.

[51] *Annuaire statistique des Pays-Bas,* 1927, p. 40; Harald L. Westergaard, *Die Lehre von der Mortalität und Morbidität,* Jena, 1901, pp. 530 ff.; Émile P. Levasseur, *La population française,* Vol. II, Paris, 1891, pp. 115, 118; Carl Ballod, *Die mittlere Lebensdauer in Stadt und Land,* Leipzig, 1899, pp. 43 ff.

[52] For data on other countries, many important details, and an analysis of the situation see the works cited above of Koelsch, Collis, Stevenson, and Hill, and that of Teleky, cited below. See also Prinzing, *op. cit.,* pp. 454 ff.; and Richard Thurnwald, "Stadt und Land im Lebensprozess der Rasse," *Archiv für Rassen- und Gesellschafts-Biologie,* I, 719 ff.

the young, have a rate of tuberculosis somewhat lower than the corresponding country age groups and although the curves for tuberculosis vary considerably in different country-city comparisons, nevertheless it may be stated that tuberculosis is more prevalent in the city, especially among the large occupational classes.

The various strata of the city population present great contrasts and greater variability than the country, because the well-to-do classes and some classes of occupations have very low rates of tuberculosis, while the very poor classes and some other classes of occupations have exceedingly high rates. This, as Teleky says, is much more conspicuous than the contrast between the country and the city.[53]

The factors determining the prevalence of tuberculosis in the city probably are largely factors of environment. Poverty, foul air, overcrowded rooms, insufficient nourishment, and indoor work have been found to be correlated with tuberculosis and help to make it more prevalent in the cities.[54] This conclusion is corroborated by the fact that tuberculosis decreases with the improvement of the economic and sanitary conditions of cities. The factor of migration cannot be excluded in accounting for several peculiarities in the distribution of tuberculosis in the country and the city population.

II. VENEREAL DISEASES, SYPHILIS IN PARTICULAR

Notwithstanding the differences between the country and the city in the accuracy of the registration of venereal diseases, especially syphilis, it seems reasonable to conclude that both syphilis and other forms of venereal diseases are more prevalent in the urban than in the rural population. The principal data are given in the paper of Hans Haustein in the readings,[55] but to these we shall add important data on the United States and England.

The data based on the examination of the American drafted men of 1864 reveal that the rate of syphilis among the farmers

[53] Ludwig Teleky, "Die Tuberkulose," *Handbuch der soziale Hygiene,* Vol. III, Berlin, 1926, pp. 123 ff., gives the rate of tuberculosis according to income groups in Hamburg, Vienna, Paris, and other cities.

[54] See the analyses presented in the studies cited above of Teleky, Prinzing, and Koelsch; throughout all the volumes of the *Handbuch der soziale Hygiene,* cited; and in all the studies in *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich.

[55] See also Prinzing, *op. cit.,* pp. 226 ff.; A. Blaschko and W. Fischer, "Einfluss der sozialen Lage auf die Geschlechtskrankheiten," *Krankheit und sociale Lage,* ed. by M. Mosse and G. Tugendreich, pp. 501–508.

was lower than in any other of the 76 occupational groups.[56] The data in the army examination records of 1917 and 1918 disclose that there were 89 syphilitics in the rural districts for every 100 in the cities. As for the other venereal diseases, the rate of chancroid was the same in city and country; that for gonococcus infection was slightly higher in the rural districts, the ratio of country to city being 109 to 100. This rate was caused primarily by the spread of venereal diseases among the negro population.[57]

In England and Wales from 1910 to 1912 the death rate from venereal and urinary diseases was lower among the agricultural laborers than in any other of the eight social classes studied, and from 1921 to 1923 it was one of the lowest of the 178 occupations studied.[58]

The city population is recognized as less healthy in this respect than that of the country. The rate, however, of the venereally diseased in the city population fluctuates considerably from group to group and from stratum to stratum and sometimes shows as great contrasts between various groups of the city population as between the city and the country population. The variability, therefore, of the urban population is probably greater than that of the country population.

Environmental factors are primarily responsible for the greater spread of venereal diseases within the city population. The city facilitates their diffusion because it is the center of prostitution, because there is more sexual life outside marriage, and because it contains a greater percentage of divorced persons, among whom there is generally a much higher rate of venereal disease. In the city sexual impulses awaken somewhat earlier than in the country; more opportunity is given for sex satisfaction through prostitution; the city attracts a crowd of people from various other regions who are venereally diseased; and the city maintains the

[56] Baxter, *op. cit.*, Vol. I, Chart XXVI.

[57] Albert G. Love and Charles B. Davenport, *Defects Found in Drafted Men*, p. 353. As has been mentioned, the authors regard as "rural" all communities with a population below 25,000. It is clear that this is not a rural population. And it is probable that if comparisons were made between the "open farm" population and the population of the city, the results would be considerably different and would favor the country population. But even as it is, the data are significant. This conclusion is confirmed by Paul L. Vogt's study of the situation in the towns and open country of two counties. See his *Introduction to Rural Sociology*, pp. 210 ff.

[58] See T. H. Stevenson, "The Social Distribution of Mortality," *Biometrika*, XV (1923), and the excerpt from his report as registrar-general for England and Wales to be found in the readings in the next chapter.

army. In these and like ways it helps greatly to spread these diseases.[59]

The factor of migration and selection must also be mentioned in this connection. The higher rate of venereal disease in the city is due in a considerable degree to the fact that many diseased individuals from the country go to cities for treatment and remain there. This increases the army of infected citizens. On the other hand, a stream of persons—soldiers, salesmen, officials, students, and working people—infected with venereal diseases flows incessantly from the cities to the country. These infected persons spread the diseases among the rural people, and because of lack of medical treatment they are very often the agents responsible for the wholesale infection of country areas. This exodus of the venereally diseased from the city to the country seems to have been vastly greater than the influx from the country to the city. A considerable proportion of venereal disease in the country is due to infection from the city migrants. When these infected individuals finally flock to the city, the city is receiving its own victims.

III. ALCOHOLISM AND THE USE OF DRUGS

The data indicate very definitely that these habits are more common among the urban than among the rural or the agricultural population. Examinations of the United States Army show the ratio of rural alcoholism to urban alcoholism to be 30 to 100. The corresponding ratio of drug addiction is 25 to 100.[60] The mortality statistics of the United States are similar. The table below gives the crude death rate per 100,000 from alcoholism.[61]

Similar conclusions may be drawn from the occupational mortality data of the Metropolitan Life Insurance Company on the rural death rate from alcoholism and cirrhosis of the liver, closely

NUMBER OF DEATHS FROM ALCOHOLISM PER 100,000 POPULATION IN THE UNITED STATES

POPULATION GROUP	1923	1922	1920	1917	1914	1910
Cities of registration states	4.6	3.5	1.3	7.1	6.2	6.7
Rural districts of these states	2.0	1.8	0.7	3.5	3.7	4.1

[59] For an able analysis of the problem see Blaschko and Fischer, *op. cit.*, and Hans Haustein, "Die Geschlechtskrankheiten einschliesslich der Prostitution," *Handbuch der soziale Hygiene*, Berlin, 1926. A portion of the latter work is given in the following readings.

[60] Love and Davenport, *op. cit.*, pp. 359–360.

[61] Bureau of the Census, *Mortality Statistics*, 1923, p. 54.

associated with it.[62] The papers of Dresel and of Stevenson given in the readings of the next chapter, those of Meuriot and Horlacher in the chapter on "Rural Social Control," and the introduction to that chapter (Volume II, pages 286, 329–332, 340–342) supply similar data for various countries.

IV. TABES DORSALIS AND GENERAL PARALYSIS OF THE INSANE

Since these diseases are somewhat related to syphilis and since syphilis is more common in the urban population, it is to be expected that the rate of locomotor ataxia (tabes dorsalis) and general paralysis of the insane will be higher in the city.

Examinations of the United States Army during the World War show that the ratio of the rural recruits to the urban was .59 to 1.0 for tabes dorsalis and .67 to 1.0 for general paralysis of the insane.[63] English mortality statistics give the rate among agricultural laborers as 33; the rates among other classes are 117, 95, 92, 98, 146, 71, and 69.[64] The agricultural class, therefore, has a much lower incidence in England. The data in several other countries agree with these, at least concerning progressive paralysis. For instance, in Innsbruck, Austria, during the decade from 1889 to 1899 there were 1.3 paralytics per 100 population, as compared with only 0.4 in the surrounding country. In Prussia in the period from 1898 to 1901, 16.2 men in every 100 newcomers to insane asylums were suffering from progressive paralysis, but the rate in Berlin was 18.8. The corresponding rates among women were 7.5 and 13.8. Generally the urban and industrial districts in Germany, Austria, Russia, and other countries have a higher proportion of progressive paralysis than the rural districts. The more industrialized countries have higher rates than those less industrialized.[65] There are several exceptions, but they do not invalidate the rule.[66]

[62] Dublin, *op. cit.*, pp. 8, 38. See also Thurnwald, *op. cit.*, p. 725; Arthur Newsholme, *Elements of Vital Statistics*, p. 321 and chap. xxviii.

[63] Love and Davenport, *op. cit.*, pp. 352, 360.

[64] Stevenson, *op. cit.*, p. 387. See also the reading from his report in the next chapter. These figures express the rates in various classes as percentages of the rate for England as a whole. Since the basic figures upon which rates are computed differ in the different studies that we have cited here, we have given, in several instances, only the comparative rates in agriculture and in other classes. Readers who are interested in the absolute figures are referred to the original sources.

[65] Prinzing, *op. cit.*, pp. 177–178.

[66] See *Krankheit und soziale Lage*, ed. by M. Mosse and G. Tugendreich, pp. 403 ff.; for other data see the discussion of mental diseases in chapter xx of this *Source Book*.

V. HEART DISEASE

Deaths from heart disease constitute about 14 per cent of all deaths, the rate for the city being higher than for the country. The mortality statistics of the United States give the following crude death rates in the rural and urban classes in specific years.[67]

CRUDE DEATH RATES FROM HEART DISEASE PER 100,000 POPULATION IN THE UNITED STATES

POPULATION GROUP	1923	1920	1917	1914
Cities in registration states	201.0	177.9	191.3	171.9
Rural districts in registration states	153.3	142.5	153.6	147.1

The examinations of the recruits of 1864 show that the rate of diseases of the circulatory system was very low among farmers as compared with the rate in other occupations, and much lower than the average rate for all the occupations studied.[68]

The examination of the United States Army from 1917 to 1918 revealed the following ratios for various forms of heart disease.[69]

RURAL-URBAN RATIOS FOR VARIOUS FORMS OF HEART DISEASE IN THE UNITED STATES

DISEASE	URBAN	RURAL
Cardiac hypertrophy	1.00	.72
Valvular diseases of the heart	1.00	.71
Myocarditis	1.00	.71
Endocarditis	1.00	.65
Cardiac dilation	1.00	.88

The mortality statistics of the Metropolitan Life Insurance Company, properly interpreted, do not contradict this conclusion.[70] In Italy, though the crude death rate from heart diseases is slightly higher among agricultural males, 11.6, than among the males of other occupational groups, 10.0, standardization would presumably reverse this difference.[71] In England and Wales the

[67] Bureau of the Census, *Mortality Statistics*, 1923, p. 55.
[68] Baxter, *op. cit.*, Vol. I, Chart XXXI.
[69] Love and Davenport, *op. cit.*, p. 352.
[70] See Dublin, *op. cit.*, pp. 8–9, 14, 37, 65, and Pitirim A. Sorokin and Carle C. Zimmerman, *Principles*, pp. 163–164.
[71] *Annuario statistico italiano*, 1922–1925, p. 49; Giusti, *op. cit.*, p. 22.

rate of mortality from valvular diseases of the heart is lower in the agricultural class than in any other social class, as seen in Stevenson's article cited and in his report as registrar-general given in the readings in the next chapter.

The data on other countries indicate the same rural-urban difference in the extent of heart diseases. For instance, the comparative rates of mortality from heart disease in Vienna and in Lower Austria (without Vienna) in 1900 and 1901 were as follows:[72]

Comparative Ratios of Mortality from Heart Disease in Vienna and in Lower Austria, 1900–1901

Age Group	Vienna	Lower Austria (without Vienna)
0–5	42	34
5–15	34	19
15–60	127	87
60 and above	1,189	806
All ages	174	139

The data on the recruits of Holland disclose the fact that the incidence of heart diseases increases with the increase in the size of the community.[73] The data on other countries suggest a similar conclusion.[74] When we consider that the rate of heart diseases increases with the urbanization of a country,[75] that alcoholism as a factor is more prevalent in the city, that overeating, mental stress, anxiety, agitation, and strenuous psychical life favor increase of heart disease,[76] that, too, very heavy physical work in the city is likely to lead to similar conditions, we naturally expect the city population to have a higher death rate from heart

[72] Prinzing, *op. cit.*, p. 462.

[73] *Annuaire statistique des Pays-Bas,* 1927, p. 40.

[74] See Finkelnburg, "Über den hygienischen Gegensatz von Stadt und Land," *Zentralblatt für allgemeine Gesundheit,* 1882, I, 44 ff.; Max Rubner, *Hygienisches von Stadt und Land,* Munich, 1898, pp. 31 ff.; Ballod, *op. cit.*, pp. 44–46.

[75] See, for instance, Louis I. Dublin, "The Problem of Heart Disease," *Harper's Magazine,* January, 1927.

[76] See Prinzing, *op. cit.*, p. 463; the studies of Rudolf Kaufmann, Über den Einfluss der Berufe auf das Herz," *Handbuch der soziale Hygiene,* Vol. II; Hermann Rautmann, "Soziologie innerer Krankheiten," *ibid.*, Vol. V; and Richard Bernstein, "Land- und Forstarbeiter," *ibid.*, Vol. II. See also F. Hirschfeld's study in *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, pp. 143 ff.

disease. Therefore, though uncertain of the accuracy of the statistical data, particularly of the country population, we may accept the conclusion of greater incidence in the city as probably valid.

The proportion of heart disease varies so greatly among the rich and poor, in the overfed and the undernourished layers of the city population, and within the urban occupational groups that the contrasts between them are more striking than those between the country population and that of the city, where there is a mixture of very different elements.[77] Environment, heredity, and the factor of migration seem to be responsible for the higher rate among the city population.

VI. ARTERIOSCLEROSIS AND RELATED DISEASES

This classification comprises a group including a great many ill-defined diseases, principally of the circulatory system, classified somewhat differently in different countries. The examination of the United States Army in 1864 showed the rate of general diseases of the circulatory system to be 28.678 per 1,000 among farmers, as compared with the much higher rate of 34.607 per 1,000 persons in all other occupations.[78] In 1917 the comparative rate of the occurrence of various diseases of this group among rural and urban recruits was as given in the table below.[79] These data, like those of Baxter, show that the farmer and the rural population are in a better condition than the urban population. In Holland in 1924 the percentage of recruits with these defects from the rural districts was lower than the percentage from communities of 5,000 population and over.[80] The mortality statistics for angina pectoris and arteriosclerosis in England and Wales during the years from 1910 to 1912 prove the rate to be lower in the agricultural class than in any other, as shown in Stevenson's article cited and in his report as registrar-general. In Italy for the years 1921 to 1923 the death rate from "diseases of the arteries" per 100,000 population was 5.1 in the eighteen large cities and 3.0 in Italy as a whole.[81]

[77] For further details see the works and references cited throughout this chapter.

[78] J. H. Baxter, *Medical and Anthropological Statistics of the Provost-Marshal-General's Bureau*, Vol. I, Chart XXXI.

[79] Love and Davenport, *op. cit.*, pp. 351 ff.

[80] *Annuaire statistique des Pays-Bas*, 1927, p. 40.

[81] Ugo Giusti, *Le grandi città italiane*, p. 22.

RATIOS OF DISEASES OF THE CIRCULATORY SYSTEM AMONG RURAL AND URBAN RECRUITS IN THE UNITED STATES

DISEASE	RURAL	URBAN
Arteriosclerosis and hypertension	.77	1.0
Varicose veins and varicocele	.96	1.0
Tachycardia	.84	1.0
Functional cardiac disorders	1.04	1.0

Inasmuch as alcoholism, venereal diseases, forms of drug intoxication, and use of tobacco are factors in these diseases, it is probable that the city population, which has higher rates for all these than the country population, must be somewhat more liable than the country population to have arteriosclerosis and related diseases.

VII. APOPLEXY AND MINOR PARALYTIC CONDITIONS

This category of diseases includes apoplexy, facial paralysis, paraplegia, monoplegia, and paralysis of the ocular and some other muscles. The examinations of the United States Army in 1917 and 1918 show virtually the same rates in the urban (1.0) and rural (0.98) groups.[82] But Dublin's study of mortality rates from cerebral hemorrhage, apoplexy, and paralysis among the policyholders of the Metropolitan Life Insurance Company gave a higher rate, 9.7, among farmers than that among occupational groups taken together, 6.2. This higher rate is due mainly to the greater average longevity of the farmers. When the comparison is made according to age groups, the death rates among farmers are no higher than those among all groups studied.[83] While the rate of the farmers is a little higher in the ages from 15 to 34, it is conspicuously lower in the ages from 35 to 54 and is identical in the ages from 55 to 64. Thus these data suggest that there is no appreciable difference between the rural and urban classes.

The data for England, however, show that the agricultural class has a rate of mortality from apoplexy and hemorrhage of 46, which is much lower than in any other large class, as shown

[82] Love and Davenport, *op. cit.*, p. 362. The examination of the United States Army in 1864 reveals the ratio among farmers as 1.455 and the ratio among all occupational groups as 1.415. Thus the ratios there are also very similar. The slightly greater prevalence of the disease among farmers may be explained by the lack of differentiation of the various forms of paralysis. See Baxter, *op. cit.*, Vol. I, Chart XXIX.

[83] Louis I. Dublin, *Causes of Death by Occupation,* United States Bureau of Labor Statistics Bulletin No. 207, pp. 8, 37.

in Stevenson's article and in the reading from his report as registrar-general. In France in 1887 the mortality rate from paralysis was 25.1 in cities of over 20,000 population, and 51.2 in cities from 10,000 to 20,000.[84] In Prussia in 1876 and 1877 and in 1895 and 1896 the mortality rates from apoplexy and brain diseases of both sexes were considerably lower in the country than in the city in all age groups.[85] In Italy in the years from 1922 to 1925 the death rate from these diseases among males 15 years of age and over was 12.6 among those engaged in agriculture and 12 in all occupations. This difference is, of course, very slight.[86]

In Austria the situation was as follows:[87]

Death Rate from Apoplexy and Related Causes per 1,000 Population in Austria

Section of Country	1913	1923
Vienna	2.86	3.70
Upper Austria	3.19	2.96
Lower Austria	2.50	2.45

The total data seem to suggest no appreciable difference between the urban and the rural populations.

VIII. CANCER AND MALIGNANT TUMORS

The significance and the increasing menace of cancer are well known. The data, which are somewhat contradictory, do not permit the conclusion that the rural population is less healthy than the urban population, but rather show the opposite tendency. According to mortality statistics, the rate of mortality from these diseases among the city and country populations of the United States is as shown in the table below.

Death Rate from Cancer and Other Malignant Tumors per 100,000 Population in the United States

Population Group	1923	1920	1918
Cities in registration states	106.9	99.8	94.9
Rural districts in registration states	73.5	68.0	67.1

[84] Émile P. Levasseur, *La population française*, II, 118.
[85] Carl Ballod, *Die mittlere Lebensdauer in Stadt und Land*, pp. 44–45.
[86] *Annuario statistico italiano*, 1922–1925, p. 49.
[87] *Journal de la société de statistique de Paris*, 1926, p. 295.

A crude rate is, of course, misleading, but when we take the adjusted rate or the rate among specific age groups, the results seem to be the same. The geographical distribution of the rates according to states and areas and the urban rates leave no doubt that it is more common in the highly urbanized areas—the eastern manufacturing regions—and in the cities than in the country.[88] The data of the Metropolitan Life Insurance Company on death rates from cancer among farmers do not contradict this conclusion when they are standardized according to age groups.[89]

The data on England and Wales for the years 1910 to 1912 show that the agricultural class has the lowest rate of mortality from cancer.[90] The data on other countries show a similar distribution. Thus with some exceptions the relevant statistics support the thesis that the rate of mortality from cancer is higher in the city than in the country. This agrees with the fact that an increase in urbanization is correlated with an increase in cancer.[91] However, in view of many uncertainties, the conclusion is only a tentative one. The cancer rates are different for the rich and poor in the city and for various urban occupational groups. The differences in many cases are greater than those between urban and rural populations,[92] for the city population is composed of more heterogeneous elements and is far more variable than is the country population.

IX. NEPHRITIS AND BRIGHT'S DISEASE

The mortality statistics of the United States give the following crude rates of rural and urban deaths from acute and chronic nephritis.[93]

[88] Bureau of the Census, *Mortality Statistics,* 1923, pp. 41–50.

[89] See Dublin, *op. cit.,* pp. 9, 37, 65, and Sorokin and Zimmerman, *op. cit.,* pp. 166–167. For proof that cancer is predominantly a disease of advanced age, see Louis I. Dublin, "The Chance of Death from Cancer," *Surgery, Gynecology, and Obstetrics,* May, 1927, pp. 279–280, and Louis I. Dublin, E. W. Kopf, and Alfred J. Lotka, "The Components of Death Curves," *American Journal of Hygiene,* VII, 303 (May, 1927).

[90] See T. H. Stevenson, "The Social Distribution of Mortality," *Biometrika,* XV (1923), and his report given in the next chapter. See also Mathew Young and W. T. Russell, *An Investigation into the Statistics of Cancer in Different Trades and Professions* (Medical Research Council, Special Report Series, No. 99), London, 1926, p. 12; Collis and Greenwood, *op. cit.,* p. 170.

[91] Louis I. Dublin, *The Chance of Death from Cancer,* Chicago, 1927. See also Sorokin and Zimmerman, *op. cit.,* pp. 167–169.

[92] See the data in Friedrich Prinzing, *Handbuch der medizinischen Statistik,* pp. 438–439; in the works cited above; and in the works of Konrad Körösy and others.

[93] Bureau of the Census, *Mortality Statistics,* 1923, p. 59.

NUMBER OF DEATHS FROM ACUTE AND CHRONIC NEPHRITIS PER 100,000 POPULATION IN THE UNITED STATES

POPULATION GROUP	1923	1922	1921	1920	1918
Cities in registration states	101.6	99.9	93.9	100.2	114.6
Rural districts	79.4	77.9	73.3	78.1	80.8

The examination of recruits in 1917–1918 gave the ratio of rural to urban nephritis as .65 to 1.0.[94] Dublin's data reveal also that the rate of mortality from Bright's disease is lower among farmers than among any other occupational group;[95] in England and Wales the death rate in a standard population was 44 among agricultural laborers; in the other classes it was 108, 107, 110, 88, 116, 124, and 62.[96] In Italy during 1924 the corresponding death rate among males 15 years of age and above engaged in agriculture was 2.5, while among all other occupations it was 3.1.[97] From 1921 to 1923 the number of deaths per 10,000 population from diseases of the kidney was 5.9 in 18 large cities and 4.4 in Italy as a whole.[98]

The data on other countries are scarce and fragmentary, but they seem to indicate a similar condition.[99] The conclusion is also supported by the fact that the increase of Bright's disease and some related diseases is correlated with the increase of urbanization and industrialization in some western countries.[100] Furthermore, the death rate from these related diseases is very different among various urban groups, especially the well-to-do and the poorer classes.[101] Hence we must consider the city population as highly heterogeneous.

X. DIABETES MELLITUS

The mortality statistics of the United States give the following death rates among urban and rural populations:[102]

[94] Love and Davenport, *op. cit.*, p. 352.

[95] Louis I. Dublin, *Causes of Death by Occupation*, United States Bureau of Labor Statistics Bulletin No. 207, pp. 8, 37.

[96] Stevenson, *op. cit.*, pp. 385 ff. See also the reading from his report as registrar-general for England and Wales given in the next chapter.

[97] *Annuario statistico italiano*, 1922–1925, p. 49.

[98] Giusti, *op. cit.*, p. 22.

[99] See Prinzing, *op. cit.*, p. 463; Ballod, *op. cit.*, pp. 44–45.

[100] For data see Arthur Newsholme, *Elements of Vital Statistics*, pp. 180 ff.

[101] For data see *Krankheit und soziale Lage*, ed. by M. Mosse and G. Tugendreich, pp. 144 ff.

[102] *Ibid.*, p. 52.

RATE OF MORTALITY FROM DIABETES IN THE UNITED STATES

POPULATION GROUP	1923	1920	1918	1916	1914
Cities in registration states.....	21.9	19.4	18.8	20.0	18.4
Rural districts of registration states....	14.3	13.1	13.4	14.4	14.3

Love and Davenport's study on *Defects Found in Drafted Men* gives the ratio of the rural to the urban rate as 75 to 100.[103] The occupational statistics of the Metropolitan Life Insurance Company disclose a very low rate among farmers.[104] The data on the occupational morbidity in England and Wales give the following rates of mortality from diabetes among the eight classes of the population at the ages of 25 to 65: agricultural laborers, 45; classes I, II, III, IV, V, VI, and VII, respectively: 146, 141, 92, 87, 82, 108, and 63.[105] The data for other countries are similar:[106]

We shall refrain from quoting other existent data, since they are similar.[107] The differences found between cities and rural districts are corroborated by the fact that there has been a systematic increase of the disease with the progress of urbanization in many countries within the last few decades, as shown in the original sources. Thus we must conclude that diabetes is more prevalent in the city population. That this higher rate, as well as the increase, may be due to a better registration of the disease in the city in recent decades is doubtful.[108] In view of the theoretical character of the hypothesis itself, the great difference between the rates for the city and the country, and the functional relationship between diabetes and diet, especially overeating and insuf-

[103] *Ibid.*, p. 355.

[104] Dublin, *op. cit.*, pp. 37–38.

[105] Stevenson, *op. cit.*, pp. 385–387; see the details there and in the Supplement to the Seventy-fifth Annual Report of the Registrar-General for England and Wales, 1912, Part IV. The data for 1921–1923 given in the readings show that with the exception of a subgroup, "farmers and their relatives," the agricultural groups had a rate much lower than the average rate in the whole occupational population. See the reading from the report of the registrar-general, given below.

[106] Frederick L. Hoffman, "The Mortality from Diabetes," *Boston Medical and Surgical Journal*, July 27, 1922, pp. 135–137.

[107] See Georg Heimann, "Die Verbreitung der Zuckerkrankheit im preussischen Staate," *Deutsche medicinische Wochenschrift*, 1900, pp. 505–506; Prinzing, *op. cit.*, pp. 397–398; Magnus-Lewy, "Diabetes Mellitus," *Spezielle Pathologie und Therapie innerer Krankheiten*, ed. by Friedrich Kraus and Theodor Brugsch, Berlin, 1919, Vol. I; Hermann Rautmann, "Soziologie innerer Krankheiten," *Handbuch der soziale Hygiene*, V, 418.

[108] See a discussion of this consideration in Newsholme, *op. cit.*, p. 374, and Prinzing, *op. cit.*, p. 397.

COMPARATIVE RURAL AND URBAN RATES OF MORTALITY FROM DIABETES IN VARIOUS COUNTRIES

COUNTRY AS A WHOLE		CITY		PROVINCE	
Canada	...	Montreal	11.2	Manitoba	6.0
		Toronto	11.1	Alberta	6.7
		Victoria City	11.5	Ontario	11.5
				Nova Scotia	10.5
Scotland	9.7	Edinburgh	10.4		
		Glasgow	8.8		
Ireland	8.3	Belfast	9.0		
Spain	5.8	Barcelona	14.9		
		Madrid	6.3		
Holland	12.5	Amsterdam	15.9		
Italy	5.1	Milan	6.3		
		Turin	7.2		
		Florence	14.1		
Japan	2.8	Tokyo	4.1		
England	11.8	London	10.3		

ficient exercise,[109] the data may probably be considered authentic to some extent.

The several classes of the city population show greater variability in the rates of diabetes than exists between city and country. As a rule, the well-to-do and professional classes have higher rates than the poorer classes.[110]

XI. PELLAGRA

This disease seems to be predominantly rural. The mortality statistics of the United States disclose the fact that the number of deaths in the rural population from this cause has been three

[109] See *Krankheit und soziale Lage*, ed. by M. Mosse and G. Tugendreich, pp. 144–147, and the *Handbuch der soziale Hygiene*, V, 418.

[110] See, for instance, the data given above for England and Wales. In Gotha, according to Florschütz, the rate of mortality from the disease among those from 15 to 90 years of age who were insured up to 3,000 marks was 43; among those insured from 3,000 to 6,000 marks, 117.1; among those insured over 6,000 marks, 120.2. See G. Florschütz, *Allgemeine Lebensversicherungsmedicin*, Berlin, 1914, and the *Handbuch der soziale Hygiene*, V, 418.

times as great as that in the urban population. This means that the mortality rate from this cause is much greater in the rural population than in the total population of the United States.[111] The data for other countries confirm this statement definitely. In Italy during 1924 the rate of death from pellagra among agricultural males was 0.1, while in all other occupations it was 0.0.[112] In Rumania, a recent investigation discloses, there was only one city man for every fifty country men with this disease. The studies of the former Austria-Hungary, Russia, and other countries indicate similar conditions.[113] While the typical distribution of pellagra is as described, the extent of the disease is relatively insignificant in the majority of countries, the number suffering or dying from it generally being very small, especially in urbanized countries.

XII. PUERPERAL FEVER AND DISEASES OF CHILDBIRTH

Varro noticed in ancient Rome that the country women bore children more easily than the city women.[114] At present such a contrast scarcely exists. The rates of mortality from puerperal causes show no consistency. Since the rate of this particular disease is an important indication of the comparative vitality of rural and urban females, we cannot omit a cursory analysis of puerperal disease and of death from childbirth. The mortality statistics of the United States give the following rates of deaths from this cause per 1,000 live births in the rural and the urban classes.[115]

RATE OF MORTALITY FROM PUERPERAL CAUSES PER 1,000 LIVE BIRTHS IN THE WHITE POPULATION OF THE UNITED STATES, 1918–1923

LOCATION	1923	1921	1919	1918
Cities in the registration area.....	7.1	7.4	7.6	9.3
Rural districts in the registration area..	5.3	5.4	6.3	8.4

The data for colored women of the city and the country also lead to the conclusion that the rates are lower among country women. In England and Wales in 1919 the mortality of women

[111] See the Bureau of the Census, *Mortality Statistics,* 1923, p. 51.
[112] *Annuario statistico italiano,* 1922–1925, p. 49.
[113] See Prinzing, *op. cit.,* pp. 396–397. See references to other literature there.
[114] Varro, *Rerum rusticarum libri tres,* New York, 1913, p. 260. See chapter i of this *Source Book.*
[115] Bureau of the Census, *Mortality Statistics,* 1923, p. 61.

in childbirth per 1,000 live births was 3.73 in London; 4.52 in the county boroughs; 4.46 in other urban districts; 4.35 in the rural districts; and 4.37 in the two countries as a whole. The data for the number of cases of puerperal fever per 1,000 births are as follows: 3.8 for the metropolis of London; 3.7 for county boroughs; 2.2 for other urban districts; and 2.1 for rural districts.[116] The rates among rural women were smaller. In Germany in 1905 the rate of mortality from puerperal diseases per 1,000 births in large cities was 1.94; in smaller cities, 1.29; and in small communities, 1.27. The rates of death from other diseases of childbirth decrease in a similar way as one proceeds from large cities to small communities. In Austria the rate among farm or peasant women is practically the highest, although it is very low among the well-to-do rural classes.[117] In Scotland in 1918 the rate of death from puerperal causes was 7.2 per 1,000 births in the large boroughs; 7.2 in smaller boroughs; and 6.5 in the country districts.[118]

These contradictory data do not permit any general conclusion. It is well known, however, that puerperal diseases and diseases of childbearing depend greatly on various sanitary and medical precautions taken before, during, and after childbirth. Since as a rule more care is taken in the city, the country rate should be higher, other conditions being equal; according to the data for several countries, however, either there is no difference or the rate is somewhat lower among country women. The conclusion that rural women are at least as capable of bearing children as city women is substantiated further by the fact that in practically all countries the rate of stillbirth is lower among rural women than among urban. The data on this point will be given later. Inasmuch as stillbirth is a symptom of inability to bear children, the greater incidence in the cities testifies to the strength of rural women.

Various classes of the city population show conspicuous contrasts. For instance, the Austrian statistics prove that the rates of mortality from the cause under discussion vary among urban occupational classes from 0.11 to 16.68 per 100 births. The city

[116] Eighty-second Annual Report of the Registrar-General for England and Wales, 1919, pp. xci, xcii.

[117] See Wilhelm Weinberg, "Der Einfluss der sozialen Lage auf Krankheit und Sterblichkeit der Frau," *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, p. 248, and Prinzing, *op. cit.,* pp. 460 ff. Other data and citations may be found there.

[118] Sixty-fourth Annual Report of the Registrar-General for Scotland, 1918, Table 41.

rates seem to have much greater variation than the country rates.[119]

XIII. DEFECTS OF THE TEETH, EYES, AND EARS

The data based on the examinations of school children are so contradictory in regard to these defects that we shall analyze the data given for adults.

Teeth.—The data of the United States Army examinations of 1917 and 1918 show the rural-urban ratio of defective teeth to be .81 to 1.00. Thus, although contrary to the claim of several investigators, the rural recruits "show a marked superiority in the teeth."[120] The results of an investigation of 11,874 recruits (*Musterungspflichtigen*) of Germany by Dr. Röse were similar. The agricultural class had a lower percentage with defective teeth—21.4—than any of the fifteen principal occupational groups studied, in spite of the fact that the number of unfilled cavities indicated the least professional care of the teeth.[121] In Russia and in various other countries where investigations have been made the peasants generally have better teeth than the urbanites. In general, therefore, it seems probable that the country population has better teeth than the city population. A series of environmental influences in the city, food in particular, affect the teeth of the population unfavorably.[122]

Eyes.—The total data suggest the following conclusions in this field: Various defects of refraction, such as astigmatism, hyperopia, and myopia, are more common in urban populations and are probably due to conditions in the city. Blindness is distributed rather evenly. Trachoma is more common in particular parts of both rural and urban districts. The rural population, on the whole, is approximately on a par with the urban with regard to the health of the eyes. In both populations the proportion of persons with diseases of the eyes or blindness is too small to be of serious social significance.

Ear defects and deafness.—The data in this field are very in-

[119] Weinberg, *op. cit.*, p. 248.

[120] Love and Davenport, *op. cit.*, p. 371.

[121] Röse's series of papers in *Deutsch. Mschr. f. Zhk.*, Jahrgang 22, 23, 24; Fr. Willinger, "Einfluss der sozialen Lage auf Zahnkrankheiten," *Krankheit und soziale Lage*, ed. by M. Mosse and G. Tugendreich, p. 632.

[122] Many primitive peoples have conspicuously superior teeth. Excavated skeletons from the past furnish additional proof of this fact.

complete and contradictory. They indicate no uniformity in the urban-rural distribution of deafness and deaf-mutism in various countries. For other ear defects there seem to be smaller rates among the agricultural population than among the urban. As these defects are very common and as the number of deaf persons and deaf-mutes is relatively very small as compared with the total population, we may conclude that the rural population has no greater proportion of ear trouble than the urban.

XIV. DEFECTS OF THE EXTREMITIES AND DEFORMITIES OF THE TRUNK

The data of the United States Army examinations during 1917 and 1918 show that some of the defects and deformities of the extremities and skeleton are more common in the rural population, and others are more common in the urban.[123] However, we must not attach too great a significance to the mere figures, for an analysis of these defects according to states and regions indicates that their distribution depends very much upon complex factors. The defect is often due to some local, perhaps occasional, condition not connected with rural or urban life as such; for instance, the presence of malunion of fractures is the result of less skillful surgical service in the rural districts rather than of some inherent defect of rural people. Most of the comparative rates in the rural and the urban population show the same complexity. Furthermore, to understand the distribution we must compare the female population of both rural and urban classes. All communities under 25,000 were considered rural in this comparison of army statistics. Since these are all acquired defects, they do not have very great social significance. In Holland defects of the feet (not listed in the report cited) are less common among rural recruits.[124] We have no general data of this type for Germany.[125]

However, on the basis of conditions in rural and urban groups having equal proportions of insured and equally complete registration of serious injuries we may say that the agricultural population has a smaller percentage of accidents resulting in defects, deformities, and losses of extremities and other parts of the

[123] Love and Davenport, *op. cit.*, pp. 352 ff.
[124] *Annuaire statistique des Pays-Bas*, 1927, p. 40.
[125] Friedrich Prinzing, *Handbuch der medizinischen Statistik*, p. 154.

body.[126] We cannot say to what extent this is typical of other countries.

XV. UNDERWEIGHT, MALNUTRITION, OBESITY, AND VARIOUS OTHER DISEASES AND DEFECTS

We would expect obesity to be more common in the city than in the country because in the city there is a lack of exercise, fresh air, and an oversufficient and sometimes overabundant food supply, especially among the well-to-do classes. The data support this expectation. Baxter found the rate of obesity to be .643 among all occupational groups studied and .517 among farmers.[127] The examinations of the United States Army in 1917 and 1918 show the ratio of the rural and urban rates to be .64 to 1.00.[128] The American data on underweight show the ratio between country and city to be .76 to 1.00.[129] The cities have a greater proportion of both obese and underweight persons. Malnutrition, however, is more common in the country than in the city, the ratio being 1.51 to 1.00.[130] We cannot say to what extent these figures are typical of other countries.

American, English, and Dutch data on hernia and enlarged inguinal rings are somewhat contradictory, but the difference in rural-urban rates is generally slight.[131]

According to the data of the army examinations during the Civil War and the World War the agricultural and rural population of the United States has a higher rate of muscular rheumatism than the city,[132] of hemorrhoids, (the ratio being 112 to 100), of pterygium and ankylosis (112 to 100), and of arthritis (112 to 100). The urban population has higher rates than the country for various diseases of the kidneys and annexa, the ratio being 100 to 75 in 1917–1918; during the Civil War the rate was 93.128 per 1,000 among all occupational groups considered as a whole and 91.481 among the farmers;[133] the ratio of rural and

[126] *Ibid.*, pp. 154 ff.
[127] Baxter, *op. cit.*, Vol. I, Chart XXXIII.
[128] Albert G. Love and Charles B. Davenport, *Defects Found in Drafted Men*, p. 352.
[129] *Ibid.*, pp. 352, 389 ff.
[130] *Ibid.*, p. 351.
[131] *Ibid.*, pp. 351–372; Stevenson, *op. cit.*, p. 385; *Annuaire statistique des Pays-Bas*, 1927, p. 40.
[132] The general rate was 4.735 per 1,000 examined among all occupational groups and 5.894 among farmers. See Baxter, *op. cit.*, Vol. I, Chart XXV. The 1917–1918 rates were 100 and 182 in the city and country, respectively. See Love and Davenport, *op. cit.*, p. 351.
[133] Baxter, *op. cit.*, Chart XXXII.

urban rates for other diseases in 1917–1918 are as follows: goiter, simple and exophthalmic, 100 to 74; varicose veins, 100 to 90; and tonsilitis, 100 to 97. The urban rates for less important diseases were also higher.[134]

The data for other countries are too incomplete to permit any general statement. For rheumatism and ankylosis it is probable that the rates in the country populations in several places are not below those in the city populations.[135] Similarly, it is probable that the rural rates for diseases of the kidneys and annexa are lower than those in the city population. In England and Wales the mortality rate for various diseases of the digestive organs was 65 among agricultural laborers, while among other classes it was 116, 103, 93, 93, 117, 115, and 85.[136] Goiter is not due to distinctively urban or rural conditions but to local ones arising from the character of the water, lack of minerals, and so forth.[137]

XVI. INFECTIOUS DISEASES AND EPIDEMICS

It is well known that the country population has less medical, sanitary, and hygienic service than the urban population. Since the control of infectious diseases or epidemics depends greatly upon such services, it is natural to expect a somewhat greater percentage of victims among the country population than among the population of a modern city well equipped with sanitary and medical service. The facts only partially substantiate such an assumption, for sometimes the comparative rates show a quite opposite situation.

The mortality statistics of the United States prove that the crude urban rates for typhoid, malaria, smallpox, and whooping cough are below those of the rural districts; for measles there is no difference; and for scarlet fever, diphtheria, influenza, and pneumonia the situation is reversed.[138] If we consider that some of these diseases are predominantly diseases of childhood and that the proportion of children is greater in the rural population, then

[134] Love and Davenport, *op. cit.*, pp. 353 ff.

[135] In Bavaria from 1899 to 1902, however, the number of cases of acute rheumatism per 100,000 population was 212 in ten big cities and 120 in the remaining parts of Bavaria. See Prinzing, *op. cit.*, p. 463.

[136] T. H. Stevenson, "The Social Distribution of Mortality," *Biometrika*, XV, 385 ff. (1923).

[137] Compare Richard Bernstein, "Land- und Forstarbeiter," *Handbuch der soziale Hygiene*, Vol. II, pp. 600–605; G. Honmann's paper, *ibid.*, pp. 514–529; and A. Alexander's paper, *ibid.*, pp. 508–513.

[138] Bureau of the Census, *Mortality Statistics*, 1923, pp. 23–35.

only malaria and typhoid may be recognized as more prevalent in the rural population of the United States. All the other diseases are either evenly distributed or are more common in the city population of the United States.

According to the mortality rate, diphtheria and whooping cough were more common in the rural parts of Germany and Austria from 1899 to 1902; scarlet fever, measles, and pneumonia were more common in the urban populations; and typhus occupied an indefinite position. In Italy from 1921 to 1923 the rates of mortality from typhus in the largest cities were slightly lower than in Italy as a whole.[139] In Bavaria, on the other hand, the rural areas from 1894 to 1903 had a much lower rate for all these diseases than the ten largest cities.[140] In England and Wales, with very few exceptions, all age and sex groups in the rural counties, that is, in the agricultural population, have very much lower mortality and morbidity rates than the urban counties and almost all large social classes for typhus, diphtheria, scarlet fever, croup, measles, and pneumonia. The rural rate of death from whooping cough approaches or is higher than the rates in the urban parts.

From the data it is clear that we cannot state whether the city or the country population has the greater incidence of these diseases. But the data seem to suggest that, on the whole, the rates are not higher among the rural populations than among those of the city.[141]

XVII. INDICES OF SICKNESS, DISABILITY, AND INVALIDISM

In concluding this survey of the rural-urban distribution of various diseases it is necessary to summarize the data on the length and the number of occurrences of sickness and other disabilities among insured farmers and other occupational groups in the records of life insurance companies and sick and benefit societies. Although these data are relatively scarce, although some are not standardized and others are questionable, nevertheless

[139] Giusti, *op. cit.*, p. 22.

[140] Prinzing, *op. cit.*, pp. 459–463; F. Bohm, "Beiträge zur Morbiditätsstatistik Bayerns," *Beilage zur Zeitschrift des Königl. bayr. Bur.*, 1904.

[141] See the Supplement to the Fifty-fifth, the Sixty-fifth, the Seventy-fifth, and the Eighty-second Annual Reports of the Registrar-General for England and Wales, 1892, Part I, pp. 3, 52, and *passim;* 1902, pp. xlviii, lxix; 1912, Part IV and *passim;* 1919, pp. lxix–lxxiii.

they may have some value, because they furnish, in some cases, careful, comprehensive indices of the morbidity of the rural and urban groups.

Dr. Boris Emmet studied the comparative disability of more than 40,000 members of the Workmen's Sick and Death Benefit Fund of the United States of America from 1912 to 1916. He found that in the group of from 25 to 59 years of age the average annual number of days of disability per member was 6.4 in all 42 occupations studied; and 5.28 among farmers, gardeners, and florists. Of forty-two occupational groups, principally in the city, professionals, clerks, tradesmen, jewelers, and a few industrial groups, only seven had lower indices for disability than the farm group. The average annual number of days of disability per disabled person in all the occupations was 27.6 as compared with 25.78 in the farm group. In the study of the group as a whole agriculture compared favorably with the majority of the occupations.[142]

Data still more favorable to the rural class were found by Dwight Sanderson in a study of farmers and villagers in Cortland County, New York (the groups were standardized according to age). He found 4.14 days of sickness per capita per annum in the villages and 3.61 days in the open farm country; 0.193 cases of sickness per capita per annum in the villages, and 0.173 cases on the farms.[143]

Ratcliffe studied the data of the Odd Fellows, a mutual society, in Manchester, England. He found that the number of days of sickness in almost all age groups of the rural population was slightly lower than in the urban population. However, according to Finlaison, the number of days of sickness per annum among the workers of London was 9.4; among the agricultural laborers of the surrounding country it was 11.[144]

Frederick L. Hoffman in a study of fatal industrial accidents among 30,760,000 employes in the United States in 1913, found a rate of .75 per 1,000 employes in all occupations. The rate in agricultural work, including forestry and animal husbandry, was .35.

[142] Boris Emmet, "Disability among Wage Earners," *Monthly Labor Review*, Vol. IX, No. 5, pp. 33–39 (November, 1919). See also his other paper, *ibid.*, Vol. X, No. 3.

[143] Dwight Sanderson, *A Survey of Sickness in Rural Areas in Cortland County, New York*, Cornell University Agricultural Experiment Station, March, 1928, pp. 11–13.

[144] Émile P. Levasseur, *La population française*, II, 106.

Only the group "manufacturing in general" had a lower rate.[145] Accident mortality in 1908 and 1909 in the United States in all occupations, in each specific age group as well as in all age groups, was considerably lower among the farmers and farm laborers (7.7 for all ages) than among all other occupations (10.5 for all ages). Again, the rate per 100,000 population of deaths resulting from automobile accidents in the cities was 11.9 in 1917; 14.7 in 1920; and 19.4 in 1923. The corresponding rates in the rural parts were 5.9; 6.2; and 10.4.[146] Dublin showed that deaths from accidents constituted 9.3 per cent of deaths from all causes in all the occupations studied, while the percentage among farmers was 8.1.[147]

The data on the mortality from accidents in England and Wales from 1900 to 1902 were similar. The rate among all males 15 years of age and over was 79.5 in all occupations; 61.3 among farmers; 76.7 among farm laborers; 74.4 in industrial districts; and 67.6 in rural districts.[148] The data for the period from 1910 to 1912 and from 1921 to 1923 showed similar conditions. The agricultural groups, exclusive of woodmen and foresters, had a rate below the average for the country.[149] In Austria, however, the rate among those engaged in agriculture was one of the highest. However, this was due to the fact that the operators of farm machinery and corn-milling industries were included in the agricultural group as well as farmers, per se.[150]

In Prussia in 1897 and 1901 and in Germany from 1900 to 1903 the rates of serious and of fatal accidents among the agricultural occupations were lower than among the industrial and the other large occupational classes.[151] The corresponding indices for agriculture were 5.1 and 9.1 and for industry 50 and 69. (There was no standardization on the basis of sex and age in the several occupational groups.)

[145] Frederick L. Hoffman, *Industrial Accident Statistics,* United States Bureau of Labor Statistics Bulletin No. 157, March, 1915, pp. 6, 23–31, 115 ff.

[146] Bureau of the Census, *Mortality Statistics,* 1923, p. 73.

[147] Louis I. Dublin, *Causes of Death by Occupation,* United States Bureau of Labor Statistics Bulletin No. 207, pp. 37–38.

[148] *Ibid.,* p. 136.

[149] See Stevenson, *op. cit.,* and the reading from his report as registrar-general for England and Wales given in the next chapter.

[150] Hoffman, *op. cit.,* p. 149; Friedrich Prinzing, *Handbuch der medizinischen Statistik,* p. 159.

[151] For the data see Prinzing, *op. cit.,* pp. 151, 154, 159, 160, 163, 164.

The statistical results for invalidism are also significant. According to Arthur Geissler, in Saxony from 1892 to 1900 the average age of men engaged in agriculture and other out-of-door occupations who applied for insurance or subsidies on account of invalidism was 56.5 years; of men working indoors, 53.0; of women in agriculture and domestic service, 58.43; and of women in factories, 52.4.[152] Although these data unfortunately are given without standardization of the groups according to age, they do not testify against the greater vitality and vigor of the rural population. In Italy during 1924 the rate of deaths from accidents among males 15 years of age and over was slightly lower in agricultural occupations than in all occupations (a ratio of 2.8 to 3, respectively).[153] In Belgium (1923–1924) the rate was highest in large cities and lowest in communities of from 2,000 to 25,000 population; communities under 2,000 occupied an intermediate position.[154] These studies on the whole reveal rather favorable conditions among the agriculturists.

We may now present our conclusions as to the distribution of various diseases in the country and the city, among the agricultural and nonagricultural populations. Although each series of these numerous data has its shortcomings, and each has only relative value, yet, as a whole, it permits some general conclusions that may be approximately true.

1. In spite of some differences from country to country (for instance, Italian peasants are at a greater disadvantage than English farmers in a comparison of the rural and the urban population) the urban population commonly has a greater prevalence of diseases such as tuberculosis, diseases of the lungs, syphilis, venereal diseases, alcoholism, drug addiction, tabes dorsalis, progressive paralysis, organic heart diseases, arteriosclerosis, cancer, malignant tumors, nephritis, Bright's disease, dental defects, obesity, underweight, errors of refraction, diseases of the digestive organs, and diabetes mellitus. Since these diseases are the most important constitutional ones and have some influence on posterity, they offer sufficient proof that the health of the rural

[152] Arthur Geissler, "Das Alter der Invaliden beim Eintritt der Invalidität und die Ursachen der Letzteren," *Zeitschrift des K. sächsischen statistischen Bureaus,* XLIX, 216 (1903).

[153] *Annuario statistico italiano,* 1922–1925, p. 49.

[154] *Annuaire statistique de la Belgique,* 1927, Brussels, p. xliii.

population is not poorer but rather better than that of the urban population.

2. Pellagra and a few other relatively unimportant and not widely spread diseases are more common in the rural population.

3. The majority of the infectious diseases, puerperal fever, diseases of childbirth, hernia and enlarged inguinal rings, defects of the eye, ear, trunk, upper and lower extremities, rheumatic diseases, tonsilitis, goiter, and so on, are distributed, on the whole, rather evenly among the rural and urban classes.

4. These generalizations and the data concerning "general disability and sickness" prove that, on the whole, the country population and the agricultural class is healthier than the city population and the majority of the large occupational classes of the city.

5. The upper and lower classes of the urban population exhibit contrasts much greater than the contrasts within the rural population. "London shows greater extremes of excellence and superiority," but "the worst in London are lower than the worst elsewhere." [155] This may be said, in general, of the health of cities as compared with that of the country.

6. These conclusions agree with anthropometric measurements, with the medical examinations of armies and recruits, and with other fundamental sources of our knowledge of the comparative health of the rural-urban population, and they confirm the existing data still further. In turn, the increased claim of the older studies to validity helps to establish the validity of the newer data.

162. Report upon the Physical Examination of Men of Military Age by National Service Medical Boards from November 1, 1917, to October 31, 1918

Grouping of Military Men According to Physical Fitness for Military Service *

. . . Experience had shown that men of military age can be sorted into four broad groups according to their physical fitness. These groups or grades, as they were henceforth termed, the foundation upon which the whole structure of this physical census was built, were defined as follows:

[155] William L. Mackenzie, *The Health of the School Child*, London, 1907, p. 65.

* Report of Ministry of National Service, 1917–1919, London, 1920, pp. 1–5, 16–18.

Grade I.—Those who attain the full normal standard of health and strength and are capable of enduring physical exertion suitable to their age. Such men must not suffer from progressive organic disease nor have any serious disability or deformity. Minor defects which can be remedied or adequately compensated by artificial means will not be regarded as disqualifications.

Grade II.—Those who for various causes, such as being subject to partial disabilities, do not reach the standard of Grade I. They must not suffer from progressive organic disease. They must have fair hearing and vision; be of moderate muscular development and be able to undergo a considerable degree of physical exertion of a nature not involving severe strain.

Grade III.—Those who present marked physical disabilities or such evidence of past disease that they are not considered fit to undergo the degree of physical exertion required for the higher grades. Examples of men suitable for this grade are those with badly deformed toes, severe flat foot, and some cases of hernia and of varicose veins; other instances of those who should be placed in this grade are indicated later under the headings of the various diseases and disabilities. The third grade will also include those who are fit only for clerical and other sedentary occupations, such as tailoring and boot-making.

Grade IV.—All those who are totally and permanently unfit for any form of military service. . . .

. . . During the year preceding the signing of the Armistice, November 1st, 1917, to November 1st, 1918, the National Service Medical Boards conducted nearly two and a half million examinations. Table A gives a synopsis of the year's work.

TABLE A

	Number of Examinations and Reexaminations	Number of Applications to Appeal Tribunals for Reexamination	Number of Applications Refused by Tribunals
Grade I	871,769	.....	.....
Grade II	546,276	.....	.....
Grade III	756,859	.....	.....
Grade IV	250,280	.....	.....
Total	2,425,184	33,091	16,412

It will be seen that the actual number of medical examinations amounts to the large figure of 2,425,184. This figure, while it shows

accurately the amount of work done by the National Service Medical Boards, must not be taken as representing the actual number of men examined, since it includes reexaminations, and therefore the same individual in some instances figures several times in the total. . . .

On considering the figures as a whole it will be observed that out of 2,425,184 examinations of men of military age, 871,769 resulted in the man being placed in Grade I, 546,276 in Grade II, 756,859 in Grade III, and 250,280 in Grade IV. Taking these figures at their face value it would appear therefore that the necessary inferences with regard to the men examined are as follows:

1. Thirty-six per cent were placed in Grade I; i. e., approximately only one in every three had attained the full normal standard of health and strength and was judged capable of enduring physical exertion suitable to his age. The remaining 64–65 per cent, or two out of every three examined, over a million and a half in the aggregate, did not attain this standard.

2. Between 22 and 23 per cent were placed in Grade II; i. e., approximately one in five did not reach the standard of Grade I and were judged to be capable only of undergoing such physical exertion as does not involve severe strain.

3. Between 31 and 32 per cent were placed in Grade III; i. e., approximately one in every three presented marked physical disabilities or such evidence of past disease that they were not considered fit to undergo the degree of physical exertion required for the higher grades. They may be regarded for practical purposes as the "C 3" men of the army nomenclature, whose physical condition became during the war a household word, which bids fair to become a standing addition to our phraseology, at least during the lifetime of the present generation.

4. Rather more than 10 per cent were placed in Grade IV; i. e., approximately one in every nine or ten were judged to be totally and permanently unfit for any form of military service.

These four inferences may be summarized by saying that medical examinations showed that of every nine men of military age in Great Britain, on the average three were perfectly fit and healthy; two were upon a definitely infirm plane of health and strength, whether from some disability or some failure in development; three were incapable of undergoing more than a very moderate degree of physical exertion and could almost (in view of their age) be described with justice as physical wrecks; and the remaining man as a chronic invalid with a precarious hold upon life. . . .

The men examined during the year under review may be regarded

in the aggregate as fairly representing the manhood of military age of the country in the early part of the twentieth century from the standpoint of health and physique, and the deductions founded upon the observations made at the medical examination of these men may be legitimately looked upon as a trustworthy criterion of the national health of this period. . . .

THE RELATIONS OF OCCUPATION AND HEALTH

It is generally accepted by every student of modern civilization, from whatever standpoint he may be interested, that occupation and health are intimately interdependent. . . . Therefore in any collective inquiry into the health of the population, information as to the relation which is found to exist between occupation and physical fitness or unfitness is of the first importance and must of necessity take a foremost place from the standpoint of all alike, whether statesman or politician, soldier or sailor, doctor or sociologist. . . .

In the western valleys and the eastern portion of Carmarthen, the percentage of Grade I miners reaches a higher point than in any part of Wales. The miners here are usually the sons of farmers, who remain on the land and send their sons to the collieries. Therefore the type of man who becomes a miner is good—he is born and bred on the land in healthy surroundings, totally different to those obtaining during the childhood of most of our industrial population. . . . In addition, the housing and other conditions of living are good, and opportunities for open-air recreation are available. . . .

As compared with other industries in Wales, mining, apart from certain disabilities peculiar to the calling of a collier, produced an excellent type of recruit. The younger miner may be regarded as the best class of recruit in this region; hard, well-developed, and muscular, he strips well. Though rather undersized and apt to be anaemic, he makes rapid improvement under the favorable conditions of training, feeding, and fresh air provided in the army.

The physique of the metal worker, on the other hand, is poor—doubtless because he works in a superheated atmosphere and has to stand for long hours upon hot surfaces. These men often age prematurely and many are found to suffer from varicose veins, flat feet, and atheroma. . . .

The agriculturist here, as elsewhere, provides a good class of recruit, though this generalization must be qualified by the observation that those engaged on dairy farms and arable land are very liable to bad feet and rheumatism, whereas the shepherds from pastoral farms gen-

erally in mountainous districts are splendidly developed and usually sound. (See also Reports of Commissioner for Wales, pages 146 to 154.)

Passing to England, the subjoined table, showing the results of the medical examination of different groups of men between 18 and 25 in Yorkshire, indicates unmistakably the direct relation which exists between occupations and physical condition:

Occupation	Percentage of				Index of Fitness
	Grade I	Grade II	Grade III	Grade IV	
Agriculturists	74.8	13.0	9.4	2.8	89.9
Miners	76.4	9.4	11.4	2.8	89.8
Keith's standard	70.0	20.0	7.5	2.5	89.3
Agriculturists	71.9	15.5	8.8	3.8	88.8
Miners	68.9	15.1	10.5	5.5	86.8
Agriculturists	62.0	23.0	11.6	3.4	85.9
Engineers	60.9	23.9	13.4	1.8	85.9
Iron and steel workers	60.2	25.6	11.2	3.0	85.7
Lace workers	45.0	26.9	22.7	5.4	77.9
Woolen trade	54.6	10.9	24.0	10.5	77.4
Woolen trade	37.5	31.7	27.0	3.8	75.7
Tailors	33.9	21.4	33.5	11.2	69.5

It will be noticed that the miners and agriculturists head the poll and show the best grading results, which conform very closely to Professor Keith's standard. It can hardly be doubted that the gradual fall in the index of fitness shown in this table is a true criterion of the effects of the various occupations upon the physical welfare of the workers. They correspond to what we know of the conditions of life in the several trades and their accepted effect upon health too closely to be explained by the hypothesis that the agriculturist is an agriculturist because he is healthy, and the tailor a tailor because he is unhealthy. This may be true to a certain very limited extent of certain trades and industries, though even in these cases army training has demonstrated beyond all doubt the wonderful improvement in health and physique that can be attained by suitable food, regular hours, fresh air, and physical training, even in the most unpromising human material.

163. Walter Claassen: Recruit Statistics of the German Empire, 1902–1912 *

Percentage of Recruits Physically Fit in City and Country, 1902–1912

	Recruits, 1912		Percentage of All Recruits Fit for Active Service			
	Total	Fit for Active Service	1902–1905	1906–1910	1911	1912
I. Rural born						
a. Engaged in agriculture	132,147	79,960	60.1	58.8	58.1	60.5
b. Engaged in a craft...	188,666	109,128	59.0	56.7	55.5	57.8
II. Urban born						
a. Engaged in agriculture	19,491	10,825	58.4	56.9	55.2	55.5
b. Engaged in a craft...	231,864	117,678	52.9	49.4	48.9	50.8
Total and average.....	572,168	317,591	57.1	54.4	53.4	55.5
Difference between Ia and IIb	.....	.....	7.2	9.4	9.2	9.7
IIb. Urban-born craftsmen Brandenburg	1911	1911	1903–1905	1906–1910	1911	1912
1. Including Berlin	27,500	10,042	40.3	36.3	36.5	37.5
2. Excluding Berlin ...	12,206	5,336	48.7	44.4	43.7	...
3. Berlin	15,294	4,706	34.2	29.7	30.8	...
Difference between Ia and IIb3	.....	.....	25.9	29.1	27.3	...

164. Hans Haustein: Rural-Urban Distribution of Venereal Disease †

The [first] table below presents the percentage of syphilitics among the stillbirths in Holland, according to the size of the parish.

But the study of the number of luetic stillbirths per 10,000 of all births is much more instructive. The [second] table below presents the data for the Netherlands for the period from 1911 to 1920.

* From Walter Claassen, "Rekrutierungsstatistik des Deutschen Reiches 1902–1913 und Friedenspräsenzstärke," *Archiv für Rassen- und Gesellschafts- Biologie,* X, 582–585 (1913). Translated and printed with the permission of the editors of the *Archiv.*

† From Hans Haustein, "Die Geschlechtskrankheiten einschliesslich der Prostitution," *Handbuch der soziale Hygiene,* Vol. III, Berlin, Julius Springer, 1926, pp. 597–599, 607–614. Translated and printed with the permission of the publisher.

Syphilitics per 100 Stillbirths in Holland According to Size of Parish

Population of the Parish	1910–1914	1915–1919	1920
100,000 and over	6.50	4.43	4.11
50,001–100,000	1.91	1.81	2.32
20,001– 50,000	1.10	1.22	1.31
5,001– 20,000	0.66	0.68	0.90
5,000 and less	0.30	0.44	0.48

Luetic Stillbirths per 10,000 Births in the Netherlands, 1911–1920

Population of the Parish	Boys	Girls
100,000 and over	18.56	19.17
50,001–100,000	6.31	5.79
20,001– 50,000	4.68	3.63
5,001– 20,000	2.44	2.83
5,000 and less	0.91	1.40

It is clear from these two tables that syphilis as a cause of stillbirth increases with the size of the place of residence, a result that agrees with all other experience regarding the distribution of syphilis. This conclusion, however, is affected in part by the fact that in large cities the diagnosis of syphilis in the case of stillbirths is likely to be made more accurately. This alone would lead us to expect higher rates in the larger parishes.

The Swiss statistics present considerably more exact figures on syphilis as a cause of stillbirth. The reports are collected with the strictest professional ethics, for parents need not be informed of the actual cause of death. The table below presents these figures.

It follows from this table that, in all cantons, 5.88 per cent of all stillbirths are caused by syphilis, and that this figure rises to 13.72 per cent for illegitimate births. It also appears that cities are the main seats of venereal disease, because 12.78 per cent of all stillbirths and 22.48 per cent of illegitimate stillbirths in cities are caused by syphilis. In other words, in the entire country syphilis causes 1 stillbirth in every 17, in the cities it is responsible for 1 in every 7 or 8. Syphilis is responsible for 1 in every 7 illegitimate stillbirths in the entire country and for 1 in every 4 or 5 illegitimate stillbirths in the city.

While the figures reveal a considerable waste of infant life and maternal energy because of syphilis, they also give some insight into the relationship between extramarital sexual intercourse, with its associated promiscuity, and venereal disease. This relationship can be estab-

PERCENTAGE OF STILLBIRTHS RESULTING FROM SYPHILIS IN SWITZERLAND, 1901–1920

REGION	LUETIC			MACERATED			TOTAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Cantons									
a) All cases	1.45	1.67	1.56	4.28	4.33	4.32	5.75	6.00	5.88
b) Illegitimate births	5.28	5.66	5.46	7.97	8.57	8.26	13.22	14.23	13.72
Cities									
a) All cases	4.25	4.71	4.48	8.13	8.51	8.29	12.38	13.22	12.78
b) Illegitimate births	9.00	10.43	9.65	12.33	13.23	12.83	21.33	23.66	22.48

lished clearly only in the case of syphilis, because of the nature of its symptoms.

The distribution of venereal disease can be calculated approximately from the Danish statistics; for this purpose we shall use, in the first place, the statistics regarding syphilis. It is to be noted, however, that these data are secured from the place of treatment of the patients: the rural patients go to some near-by large city rather than to the local place of residence for treatment. Many patients in outlying cities prefer to consult a physician in Copenhagen.

PERCENTAGE DISTRIBUTION OF CASES OF SYPHILIS IN THE POPULATION OF DENMARK IN CITY AND COUNTRY BEFORE AND AFTER THE WAR

	Period	Copenhagen	Outlying Cities	Open Country
Cases of syphilis	1905–1914	78	18	4
Population	1911	21	19	60
Cases of syphilis	1915–1920	67	27	6
Population	1921	21	22	57

FREQUENCY OF NEW CASES OF SYPHILIS PER 10,000 POPULATION IN DENMARK

	Copenhagen	Outlying Cities	Open Country
1911	45	9	0.8
1920	38	14	1.2

Both tables indicate the relative freedom of the open country from syphilis, the small proportion affected in the outlying cities, and the large number affected in the capital. The cities, exclusive of Copenhagen, have a mortality rate from syphilis that is about eleven times as great as that for the open country. This is true of the periods both before and after the war. In 1911 Copenhagen had a mortality rate from syphilis that was five times as high as that in the other cities; in 1920 its rate was three times as high as that in the other cities.

Even if these figures give only an approximate picture of actual conditions, the relative position of the capital, outlying cities, and the open country are very probably accurately portrayed. They show the great importance of the international harbor and trade city in the diffusion of syphilis.

According to the *Lex veneris* in Sweden, the report of venereal cases is made according to the place where infection occurred. The table below gives a much more accurate insight into the varied danger of infection in city and country:

NUMBER OF RECENT INFECTIONS OF SYPHILIS PER 1,000 POPULATION ACCORDING TO THE PLACE OF INFECTION AND SEX IN SWEDEN, 1919–1920

PLACE OF INFECTION	1919		1920	
	Male	Female	Male	Female
Stockholm	6.98	3.01	3.79	1.59
Göteborg	5.94	2.65	2.86	1.54
Malmö	4.71	2.52	2.13	1.35
Norrköping	2.31	1.61	0.81	1.55
Other cities	2.01	1.08	1.11	0.47
Other countries	0.16	0.16	0.10	0.09

Thus we see that the danger of infection in Stockholm is approximately 40 times as great among men and about 20 times as great among women as it is in the open country. In the cities with less than 50,000 inhabitants it is 12 times as great among men and 6 times as great among women. It is also interesting to notice that in the country the danger of infection is about equal among men and women, whereas in the cities the danger among women is only half as great as that among men.

The short tabulation below shows the unfavorable influence of the large cities. It presents the cases of syphilitic infection from 1919 to 1921 in seven Swedish cities, distributed according to the place of infection. Stockholm as a venereal center is shown especially clearly:

DISTRIBUTION OF NEW CASES OF SYPHILIS IN SEVEN SWEDISH CITIES ACCORDING TO PLACE OF INFECTION, 1919–1921

CITY	PLACE OF INFECTION							
	Local	Stock-holm	Göte-borg	Malmö	Other Cities	Open Country	Foreign Countries	Total
Lund	23	4	.	3	.	1	2	33
Upsala	41	58	5	2	15	31	7	159
Eskilstuna	41	33	1	.	2	2	.	79
Linköping	52	5	.	.	2	6	2	67
Borås	64	1	5	.	3	5	2	80
Sundsvall	159	14	5	.	7	86	11	282
Norrköping	173	16	1	1	9	6	13	219

The table below presents figures concerning the frequency of new cases of syphilis according to age classes in large cities and rural districts of Germany [and that on page 107 presents comparable figures for gonorrhea].

Frequency of New Cases of Syphilis, According to Age and Sex, in Several German Cities and in Predominantly Rural Districts, 1919

(The figures given are the actual number reported for one month, multiplied by 12, per 1,000 living persons of the same sex and age.)

I. Cities

Age in Years	Berlin			Hamburg			Munich		
	M	F	Total	M	F	Total	M	F	Total
Less than 1 year	...	...	...	...	...	...	...	...	...
1– 9	...	0.1	0.1	...	...	...	0.3	...	0.2
10–14	0.3	...	0.2	...	0.3	0.1	0.5	...	0.2
15–19	6.6	8.3	7.5	4.6	8.9	6.9	5.5	4.2	4.8
20–24	26.8	17.3	21.2	18.0	17.7	17.8	14.4	11.0	12.5
25–29	20.8	8.8	13.8	15.7	7.3	10.7	2.2	3.5	7.3
30–39	10.0	2.4	5.9	9.0	2.3	5.5	5.1	2.0	3.4
40–49	4.3	1.1	2.6	2.4	1.0	1.7	0.5	0.2	0.4
50–59	1.1	0.4	0.8	1.2	0.7	1.0	...	0.4	0.2
60 and over	0.8	...	0.3	0.7	...	0.3	0.6	...	0.5
Total	7.4	4.0	5.6	5.2	3.9	4.5	4.1	2.3	3.1
Percentage reporting:									
Doctors			49.2			52.2			57.5
Specialists			96.2			80.0			69.8
Hospitals			54.2			100.0			100.0

II. Rural Districts

Age in Years	Köslin			Mecklenburg-Strelitz			Lower Bavaria		
	M	F	Total	M	F	Total	M	F	Total
Less than 1 year	...	...	...	...	...	...	...	...	...
1– 9	...	...	...	...	...	...	...	...	...
10–14	...	...	...	...	...	...	...	...	...
15–19	0.6	0.3	0.5	4.1	2.2	3.2	0.6	1.4	1.0
20–24	5.7	2.5	4.0	14.0	4.7	8.9	...	2.4	1.3
25–29	5.3	1.8	3.3	...	...	..	0.6	1.7	1.2
30–39	1.0	...	0.5	5.9	...	2.7	1.2	0.2	0.7
40–49	...	0.7	0.3	...	...	...	0.3	0.3	0.3
50–59	...	...	...	...	...	...	...	...	...
60 and over	0.4	...	0.2	...	...	...	...	...	...
Total	1.1	0.5	0.8	2.3	0.7	1.5	0.3	0.6	0.4
Percentage reporting:									
Doctors			57.8			72.5			64.2
Specialists			50.0			100.0			100.0
Hospitals			55.1			63.6			85.0

Frequency of Reported Cases of Acute Gonorrhea, Classified According to Age and Sex, in Several German Cities and in Predominantly Rural Districts, 1919

(The figures given are the actual number reported for one month, multiplied by 12, per 1,000 living persons of the same sex and age.)

I. Cities

Age in Years	Berlin			Hamburg			Munich		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Less than 1 year	2.4	1.3	1.8	16.5	2.1	9.4	3.0	3.1	3.1
1– 9	0.2	3.4	1.8	...	0.4	0.2	...	2.8	1.4
10–14	0.5	0.3	0.4	...	0.5	0.3	...	...	...
15–19	19.2	9.3	13.9	21.4	7.9	14.2	13.6	15.6	14.6
20–24	73.5	23.6	44.1	68.8	16.3	37.5	54.0	28.1	39.5
25–29	58.9	11.8	31.4	58.6	9.7	29.7	42.4	9.1	23.7
30–39	26.3	4.6	14.5	18.4	3.5	10.5	22.5	4.2	12.5
40–49	9.0	1.0	4.9	6.4	0.5	3.4	7.1	...	3.3
50–59	3.2	0.8	1.9	1.7	0.2	1.0	2.0	0.4	1.1
60 and over	0.8	...	0.3	0.7	...	0.3	...	...	...
Total	19.8	5.8	12.2	16.4	4.1	9.8	15.5	6.4	10.6
Percentage reporting:									
Doctors			49.2			52.0			57.5
Specialists			96.2			80.0			69.8
Hospitals			54.2			100.0			100.0

II. Rural Districts

Age in Years	Köslin			Mecklenburg-Strelitz			Lower Bavaria		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Less than 1 year	...	2.5	1.2	...	...	...	1.7	...	0.8
1– 9	...	...	...	...	...	...	...	...	...
10–14	...	...	...	...	...	...	...	0.3	0.1
15–19	0.6	1.6	1.1	6.2	4.3	5.3	3.8	5.2	4.5
20–24	14.1	4.0	8.5	30.8	7.0	17.8	19.7	5.8	12.0
25–29	8.3	1.3	4.3	27.0	11.0	18.1	11.1	5.0	7.5
30–39	2.1	1.4	1.7	13.9	...	6.3	3.3	0.7	1.9
40–49	1.1	0.3	0.7	1.9	...	0.9	1.2	...	0.6
50–59	...	...	...	2.2	...	1.1	...	...	...
60 and over	...	...	...	...	...	...	...	...	...
Total	22	.09	1.5	7.3	2.0	4.5	3.2	1.6	2.4
Percentage reporting:									
Doctors			57.8			72.5			64.2
Specialists			50.0			100.0			100.0
Hospitals			51.1			63.6			85.0

The compilation of figures for gonorrhea also shows the rural-urban difference in the frequency of infection that we have already described for syphilis. The division by age classes reveals that there is a rapid rise in the rate of infection among urban males from the class 15–20, a peak in the class 20–25, followed by a gradual decline that becomes more and more rapid. Scattered cases occur even in old age. The curves for the different cities have different heights but run approximately parallel. The typical rural curve is seen clearly in the case of Köslin and Lower Bavaria, but somewhat less clearly in that of Mecklenburg-Strelitz. The figures for the rural districts are generally less than those for the cities, and the wave of infection sets in somewhat later, so that the age group 15–20 is much less endangered than in the large cities. The decrease of the danger of infection after the twenty-fifth year of life takes place more rapidly in the country than in the city. In Berlin the rate for the age group 40–45 is still 12 per cent of the maximum, in Munich it is 13 per cent, and in Hamburg, Dresden, Breslau, and Hanover it is more than 8 per cent of the maximum. In the three selected rural districts the rate for the age group 40–45 is only 6 to 7 per cent of the maximum rate, and that for the age group 20–25. The ratio of the rates of infection among women to those among men varies considerably; but two contrasts may be observed in this comparison—the contrast between city and open country and that between the North and the South. . . .

The peak of the rate of infection among women is reached between the ages of 15 and 20 in South Germany and during the same period in the cities of North Germany, while in the country it is reached between the ages of 20 and 25. The decline in the rates after the thirtieth year proceeds with almost equal rapidity everywhere. . . .

In social hygiene a knowledge of the proportion of the population affected by venereal disease is of even more importance than a treatment of the questions arising from the number of cases reported annually. Such computations can be made for several large cities and for two countries, Switzerland and Sweden. In the case of syphilis we may expect a result more nearly corresponding to actual facts than in the case of gonorrhea, because reinfection in syphilis is rare, and those cases of reinfection that do come under observation are probably cancelled by those cases unreported.

[On the following page is presented a table showing the number of new cases of venereal disease per 1,000 persons reported in several countries during the period from 1914 to 1923.]

Number of New Cases of Venereal Diseases per 1,000 Population in Various Countries, 1914–1923

	1914	1919	1920	1921	1922	1923	1914	1919	1920	1921	1922	1923
	Sweden (Population, 1922, 5,987,000)						Stockholm (Population, 425,000)					
Lues	0.39	0.90	0.55	0.38	0.23	0.18	2.5	4.4	2.5	1.8	1.2	0.7
Chancroid	0.26	0.58	0.21	0.15	0.09	0.05	2.3	3.2	1.1	0.8	0.5	0.2
Gonorrhea	1.88	3.52	2.56	2.15	1.86	1.73	14.6	15.5	10.9	10.2	8.9	8.9
	Denmark (Population, 1922, 3,323,000)						Copenhagen (Population, 562,000)					
Lues	1.06	1.46	1.40	1.20	0.79	0.75	3.5	5.4	5.2	4.4	2.7	2.3
Chancroid	0.29	0.31	0.32	0.23	0.16	0.12	1.2	1.2	1.3	1.0	0.6	0.4
Gonorrhea	3.4	4.7	3.8	3.4	3.1	3.3	14.1	15.9	13.1	11.7	10.6	10.9
	Norway (Population, 1922, 2,717,000)						Oslo (Population, 259,000)					
Lues	0.64	0.92	0.75	0.69	0.60	...	2.4	3.6	2.8	2.6	3.1	2.8
Chancroid	0.16	0.19	0.15	0.16	0.19	...	0.7	0.8	0.8	0.9	1.1	0.6
Gonorrhea	2.00	2.35	1.93	1.74	1.97	...	5.2	7.6	6.7	7.0	7.7	7.9
	Switzerland (Population, 1920, 3,876,922)						Geneva (Population, 1920, 135,000)					
Lues			0.39						2.10			
Chancroid			0.03						0.27			
Gonorrhea			1.29						3.95			
	Lausanne (Population, 1920, 68,500)						Zurich (Population, 1920, 207,000)					
Lues			1.71						1.23			
Chancroid			0.13						0.07			
Gonorrhea			5.67						4.92			
	Bern (Population, 1920, 105,000)						Basel (Population, 1920, 136,000)					
Lues			0.85						0.64			
Chancroid			0.09						0.04			
Gonorrhea			3.16						3.85			
	Finnish Cities						Helsingfors					
Lues	1.6	4.6	3.4	2.6	2.1	1.8	2.4	5.4	3.4	2.4	1.9	1.5
Chancroid	0.8	3.0	1.5	1.3	1.2	1.2	1.2	4.1	1.9	1.2	1.2	1.2
Gonorrhea	6.1	10.7	9.7	9.6	10.2	10.1	9.4	12.3	11.2	12.0	13.4	11.8

The table below presents figures that give the rates of infection during normal years, per 10,000 of each age group in several cities exclusive of Hanover.

NUMBER OF NEW CASES OF SYPHILIS PER 10,000 IN EACH AGE GROUP IN VARIOUS COUNTRIES

AGE GROUP	HAMBURG (1913)		STOCKHOLM (1915)		HELSINGFORS (1914)		HANOVER (1919)	
	Male	Female	Male	Female	Male	Female	Male	Female
15–18	57	97	13	36	29	72	83	37
18–20	187	174	13	36	29	72	83	37
20–25	248	127	113	69	108	56	182	322
25–30	172	57	107	46	75	32	156	77
30–35	108	24	69	24	32	18	136	40
35–40	108	24	33	11	18	11	106	..
40–50	29	10	11	5	(8)	(2)	73	28

The table compiled from the death rate for the respective cities shows the danger of infection of a group of individuals observed throughout life.

NUMBER OF CASES OF SYPHILIS PER 100 LIVE BIRTHS AT EACH AGE IN VARIOUS COUNTRIES

AGE	HAMBURG		STOCKHOLM		HANOVER	
	Men	Women	Men	Women	Men	Women
15–18	1.3	2.3	0.5	1.4	3.7	1.7
19–20	2.8	2.7	0.5	1.4	3.7	1.7
20–25	9.1	4.9	4.2	2.7	5.3	9.8
25–30	6.1	2.1	3.8	1.7	5.6	2.9
30–35	7.3	1.7	2.4	0.9	4.7	1.5
35–40	7.3	1.7	1.1	0.4	3.6	..
40–50	1.8	0.7	0.6	0.3	2.3	0.9
15–50	28.4	14.4	12.6	7.4	25.2	16.8

Thus the danger of infection from syphilis may be stated as follows: In Hamburg of every 100 male births, 28.4 men are infected during the ages of maturity and of every 100 female births 14.4 women become infected during the age of maturity; in Stockholm 12.6 men and 7.4 women; and in Hanover, according to wartime experience, 25.2 men and 16.8 women. Although the figures for Hanover cannot be re-

garded as normal for that city, since they were taken during a period when rates of infection were increased, they may be regarded as typically urban figures. Thus in Hamburg 1 in every 4 men and 1 in every 7 women must reckon with the probability of being infected with syphilis; in Stockholm 1 in 8 men and 1 in 13 women; and in Hanover 1 in 4 men and 1 in 6 women will probable be infected. This astoundingly high rate of infection presents only the average probability of infection and makes no differentiation between the rates among single and married persons. It would seem that those who remain unmarried during the period of sexual maturity would have still higher rates of infection.

165. E. G. Dresel: Alcoholism in Various Occupational Classes *

A comparison of the occupational distribution of alcohol addicts with the occupational distribution of the general population, according to the occupational census of 1907, reveals that agriculture is least affected by alcoholism, despite its large absolute number of addicts.

Comparison of the Occupational Distribution of Alcohol Addicts and the Occupational Distribution of the Total Population

Occupational Group	Percentage of	
	Total Population	Alcohol Addicts
Agriculture	40.3	10.7
Industry	33.3	44.6
Trade and transportation	11.6	12.7
Public service, professions, varying employment, other occupations, and occupation unknown	14.8	32.0
Total	100.0	100.0

The percentage of alcohol addicts engaged in trade and transportation is approximately equal to the percentage of the population engaged in these occupations.

Industry and common labor (substitutes and day laborers), have the largest number of alcoholics in the population. The building trades are especially affected, for they furnish 15.5 per cent of all alcohol ad-

* From E. G. Dresel, "Der Alkohol und seine Bekämpfung," *Handbuch der soziale Hygiene,* Vol. III, Berlin, Julius Springer, 1926, p. 471. Translated and printed with the permission of the publisher.

dicts engaged in industry, agriculture, trade, and transportation. Men engaged in the iron and metal industries and in machine works, as well as stone and clay workers, also furnish a large share.

166. Ludwig Teleky: Rural-Urban Distribution of Tuberculosis *

The incidence of tuberculosis is more closely related to economic and social conditions than that of any other disease, with the possible exception of spotted typhous fever. In all countries the death rate from tuberculosis is higher in the city than in the country. Exceptions occur only in very limited areas where special conditions prevail.

Rate of Mortality from Tuberculosis in Prussia

Years	Male		Female	
	Cities	Country	Cities	Country
1880–1881	40.26	30.35	30.70	26.92
1905–1906	22.76	15.89	18.42	16.05

It is to be noted that in a large portion of Prussia the rural areas have also become strongly industrialized and that a very large proportion of the rural population is engaged in industrial activities.

The statistics for the rural districts of England distinguish between farmers and others living in the country. The rate among farmers was found to be lower than that among all men in rural districts.

Number of Deaths from Respiratory Diseases per 10,000 Men in the Industrial Districts of England, 1900–1902

Age	Pulmonary Tuberculosis	Other Diseases of the Respiratory System
15–19	5.71	3.64
20–24	14.80	6.77
25–34	20.70	10.80
35–44	33.10	23.80
45–54	27.20	49.90
55–64	26.30	102.30

* From Ludwig Teleky, "Die Tuberkulose," *Handbuch der soziale Hygiene,* Vol III, Berlin, Julius Springer, 1926, pp. 122–125. Translated and printed with the permission of the publisher.

NUMBER OF DEATHS FROM RESPIRATORY DISEASES PER 10,000 MEN, IN THE RURAL DISTRICTS OF ENGLAND, 1900–1902—*Concluded*

AGE	MEN ENGAGED IN AGRICULTURE		MEN IN OTHER VOCATIONS	
	Pulmonary Tubercu-losis	Other Diseases of the Respiratory System	Pulmonary Tubercu-losis	Other Diseases of the Respiratory System
15–19	4.07	1.51	4.56	1.21
20–24	9.90	2.81	16.75	3.12
25–34	10.70	4.13	19.41	4.60
35–44	11.10	8.10	17.60	9.10
45–54	12.50	15.70	17.10	15.80
55–64	10.10	32.60	13.20	33.60

The next table presents the differences in the death rates from tuberculosis according to the size of the place of residence. (Occupation is also an important factor.)

NUMBER OF DEATHS FROM TUBERCULOSIS, PER 10,000 POPULATION IN PROVINCES OF AUSTRIA IN WHICH A LARGE PERCENTAGE OF THE CAUSES OF DEATH ARE CERTIFIED, 1895–1896

NUMBER OF INHABITANTS	MEN	WOMEN
500 and less	27.4	26.2
501– 2,000	38.3	37.1
2,001– 5,000	48.3	44.5
5,001–10,000	60.4	52.5
10,001–20,000	50.2	41.6
20,000 and over	60.4	46.9

Although it is not easy to define the limits of the social classes, it appears that the differences between the death rates from tuberculosis in social classes are even greater than the difference between city and country. . . .

The most recent English statistics on death rates classified according to occupations present a unique mixture of social classes, determined primarily by membership in occupational classes. (Supplement to the Seventy-fifth Annual Report of the Registrar-General for England and Wales, Part IV.) The figures cited are relative and include only persons between the ages of 25 and 65.

Occupational Group	Phthisis	Diseases of the Respiratory System
All Men	142	120
Class I (upper and middle)	121	75
Class II	123	98
Class III (skilled labor)	155	109
Class IV	131	115
Class V (unskilled labor)	215	206
Textile workers	128	124
Miners	87	130
Agricultural laborers	71	63

From the same source we take the following figures for individual occupations:

Occupational Workers	Phthisis	Diseases of the Respiratory System
All men	141	120
Clergymen	45	31
Farmers	50	64
Physicians	64	81
Agricultural laborers	70	64
Coal miners	75	132
Millers	92	119
Bakers and confectioners	117	101
Teamsters	144	174
Salespersons	172	95
Stone workers	172	131
Stone cutters	237	163
Stone cutters, granite	127	64
Stone cutters, limestone	129	110
Stone cutters, sandstone	415	311
Slate workers	220	98
Cabinet makers and woodworkers	174	105
Brewers	181	158
Tailors	186	109
Innkeepers	196	156
Printers	208	94
Binders	213	130

Cobblers	222	109
Sailors	257	292
Potters and ceramic workers	282	317
Makers of scissors, files, knives, and needles	306	179
Makers of files	434	245
Makers of knives and scissors	466	211
Employes in hotels and inns	309	192
Dealers and peddlers	419	269

We see how various circumstances and dangers lead to death from tuberculosis: . . . selection of occupation (tailors, cobblers, binders, printers, dealers, and peddlers); the inhalation of dust by stone workers and the makers of knives, scissors, and files (notice the difference between workers in limestone and those in sandstone); alcoholism among brewers, innkeepers, and employes in inns and hotels. The absorption of lead is an additional danger in the ceramic arts and in the making of files.

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CHAPTER XIX

A COMPARISON OF THE VITAL PROCESSES OF RURAL AND URBAN POPULATIONS

A. SUICIDES IN RURAL AND URBAN POPULATIONS

I. RURAL AND URBAN SUICIDE RATES

Suicide is an important consideration for several reasons. First, it reveals lack of vitality, since the willful ending of one's life, in contradistinction to altruistic sacrifice, indicates a weakening of vitality or a psychological death. Secondly, it is a symptom of unhappiness, because one who prefers death to life is evidently very unhappy, for otherwise he would not take his own life.[1] Thirdly, it is a symptom of the condition of mind that when analyzed discloses a great deal as to the social relationships of various societies characterized by different suicide rates.

The fundamental fact revealed by these data is that, after corrections have been made for the differences in the sex and age composition of the city and the country populations, the city, as a rule, in all countries for which data are available, has a somewhat higher rate of suicide than the rural districts. In few cases, if any, are the urban rates lower. There are very few exceptions to the statement that the agricultural population has one of the lowest rates of suicide among all occupational groups. As a rule, it has a rate much lower than those of the industrial and commercial occupational classes or of any of the large urban occupational groups. The fact that most comparative rural-urban rates of suicide are consistent with those of the agricultural and the nonagricultural populations reinforces the validity of the separate conclusions.

The rates of suicide in predominantly agricultural countries are lower than those in highly urbanized and industrialized nations.[2] In almost all western countries the suicide rates during

[1] See Émile Durkheim, *De la division du travail social,* Paris, 1902; Pitirim A. Sorokin, *Contemporary Sociological Theories,* New York, 1928, pp. 467 ff.

[2] For a substantiation and corroboration of these propositions see Émile Durkheim, *Le suicide: Étude de sociologie,* Paris, 1897; A. Wagner, *Die Gesetzmässigkeit in den*

the last hundred years have been increasing with the rapid progress in industrialization and urbanization. Practically all the studies verify these conclusions for the past, but the situation is not so clear in recent years, because the rates of the city and the country do not differ so conspicuously. The general statements made above hold true, nevertheless. The rates among agricultural and other occupational groups disclose the fact that suicides in the agricultural class formerly yielded about the lowest index in all countries.[3] It was below the average for all occupations taken together and much below that for the large urban occupational classes of industry and commerce.

In the United States the situation differs somewhat, but it is not inconsistent with the data and conclusions. There the suicide rates in the agricultural and the important urban occupations do not seem to vary as much as in other countries.[4] The data indicate the rate for the agricultural group in the United States to be somewhat lower than the rate for the majority of the urban occupational groups.

The brief table on the following page illustrates this point.[5]

The data prove that the group of agricultural occupations has a rate below the average for all occupations and below the individual rates for the other important occupational divisions. The rate among farmers and planters is particularly low. The data of Dublin and Hoffman agree with this finding.[6] There are a few exceptions, but they do not invalidate the conclusion.[7] Thus, since a lower rate of suicide generally indicates higher vitality and less dissatisfaction with life, we must conclude that the rural population has these qualities. The conclusion concerning vitality

scheinbar willkürlichen Handlungen, Hamburg, 1864, pp. 142 ff., 176 ff.; Camille Jacquart, *Le suicide,* 1908; H. Morselli, *Der Selbstmord,* Leipzig, 1881; Georg von Mayr, *Statistik und Gesellschaftslehre,* Tübingen, 1917, III, 258–404; Paul M. Meuriot, *Des agglomérations urbaines dans l'Europe contemporaine,* Paris, 1898, pp. 352–353; Adolph D. Frenay, *The Suicide Problem in the United States,* Boston, 1927; S. Bernát, *Scheidungen und Selbstmörder,* Budapest, Hungarian Royal Statistical Society, 1927; and Desider Laky, *Scheidungen und Gründe der Selbstmorde,* Debreczen, 1927.

[3] See the studies indicated; von Mayr's paper in the readings; and Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology,* New York, 1929, pp. 172–175.

[4] Sorokin and Zimmerman, *op. cit.,* pp. 175–177.

[5] United States Bureau of the Census, *Mortality Statistics,* 1909, pp. 388 ff., 410 ff. After 1909 the tabulation of suicide statistics according to occupation was discontinued.

[6] Louis I. Dublin, *Causes of Death by Occupation,* United States Bureau of Labor Statistics Bulletin No. 207, March, 1917, pp. 8, 37.

[7] See Frenay, *op. cit.,* pp. 88 ff.

PERCENTAGE OF TOTAL NUMBER OF DEATHS DUE TO SUICIDE IN THE OCCUPATIONAL POPULATION TEN YEARS OF AGE AND OVER, 1909

OCCUPATIONS	MALES	FEMALES
Total	2.6	1.6
Agricultural (whole groups)	2.1	1.1
Laborers	3.0	...
Farmers, planters, overseers	1.8	...
Professional	2.6	1.2
Domestic and personal service	2.5	1.4
Commercial:		
Tradesmen and transportation workers	2.8	2.5
Financial:		
Bankers, brokers, and agents	2.9–4.9	...
Industrial	2.8	1.9
Clerical	3.4	2.8

accords with those reached in the study of the comparative health of rural and urban people. We shall see later that the conclusion that rural people have less dissatisfaction with life is consistent with other comparative analyses.

II. FACTORS AFFECTING SUICIDE RATES IN RURAL AND URBAN COMMUNITIES

Durkheim, in his classical study of suicide, has indicated that the main factor in suicide, as we have defined it, is either an increase of psycho-social isolation—psycho-social isolation is not to be confused with physical or spatial isolation—or a decrease in the intensity of the social cohesion of a group and the disruption of the social ties of individuals. The sudden shattering of the equilibrium and moral constitution of a society results in a sudden decrease in the intensity of social cohesion. Among single and divorced individuals there are higher proportions of suicides than among the married, because family bonds make isolation and loneliness less intensive. Among Roman Catholics, whose religion is more dogmatic and whose adherents are more strongly integrated, the percentage of suicides is smaller than it is among Protestants and freethinkers, who are bound together by weak social ties. The periods of social movements or war, when individuals come out of their shells and decrease their isolation or, in other words, increase their social cohesion,

are marked by a sudden decrease in suicide. The end of such movements, when individuals again return to a more isolated state, is marked by a sudden increase in suicide.[8]

In the light of these theories it is easy to understand why the rural population has a lower rate of suicide than the urban. The psycho-social—not the geographical—isolation of the rural population has been much less than that of the urban population. Indeed, in other chapters of this *Source Book* it is shown that the rural family is much more stable and integrated. It has a greater average number of children, a lower proportion of childless couples, and a lower divorce rate. It binds its members more strongly than the urban family. This is primary evidence that the social cohesion of rural people is greater or that their psycho-social isolation is less.

Let us consider further the rural and urban neighborhood. As we have proved in the first volume of this *Source Book*, community of tradition, feeling, belief, and interest, as well as intimacy of relationship, is much greater in the rural than in the urban communities. A man born and reared in a rural environment is bound to his neighbors by thousands of social ties stronger than those binding the city man to his acquaintances. This situation indicates that the neighborhood community in the country is much more stable and that there is less likelihood of psycho-social atomization, isolation, and loneliness.

We must consider also the more mobile and shifting character of the city population, another factor in the increase of psycho-social isolation. The continual shifting of the urban population, composed of heterogeneous strangers, furnishes few opportunities for intimacy. One individual is bound closely to another only when there is an intimate relationship, only when there is a united feeling, understanding, and trust. Intimacy destroys loneliness and isolation. Since urban people are more heterogeneous and are unacquainted with each other, and since mobility presents few opportunities and little time for establishing intimacy, real unity of feeling, and strong social bonds of religion, of friendship, tradition, and duties, it is clear that the psycho-social isolation is

[8] See the reading from Émile Durkheim, *Le suicide, passim;* and Pitirim A. Sorokin, *Contemporary Sociological Theories,* pp. 471–474, and *Social Mobility,* London and New York, 1927, pp. 522–524.

greater in the city than in the country.[9] The greater mobility of the city population leads to an increase of suicide, because the social and moral equilibrium of the urban psychic state is disturbed more often and more fundamentally.

In addition, the urban mind is more sophisticated, less dogmatic, more skeptical, and more independent of traditions and superstitions. Man is less bound by ties and is more free and isolated than in the rural community. Since freethinkers and open-minded antitraditionalists have higher rates of suicide than the fundamentalists and faithful followers of dogmatic sects and religions, it is only natural that city populations should have a greater quota of suicides than country people.

These factors, to mention no others, are sufficient to prove that the data on the distribution of suicides reflect the reality accurately and entirely agree with our knowledge of the factors of suicide and the specific characteristics of city and country communities. This conclusion is supported further by the fact that in the majority of countries increase in suicide has been correlated with increase in urbanization. The rate per 100,000 population has increased during the last sixty or seventy years in Italy from 2.8 to 8.3; in France from 7.1 to 23; in England from 7.3 to 11; in Prussia from 10.6 to 20.5; in Belgium from 6.3 to 14.2; in Ireland from 1.3 to 3.5; in Spain from 3.6 to 6.1; in the United States from 3.18 in 1860 to 11.9 in 1922; in Sweden from 8.1 to 12.4; in Japan from 11 to 20.1; in Rumania from 0.6 to 4; in Serbia from 3.8 to 5.1; and in Finland from 2.9 to 5.5. Denmark, Norway, Switzerland, and Germany were the only countries where the increase either did not take place or where the rates moved erratically.[10] It seems certain, however, that on the whole there are more suicides in the cities than in the country districts.

[9] See Pitirim A. Sorokin, *Social Mobility*, pp. 519 ff.

[10] See von Mayr, *op. cit.*, p. 279; Frenay, *op. cit.*, chap. ii; Enrico Ferri, "A Century of Homicides and Suicides in Europe," *Bulletin de l'Institut international de statistique*, Vol. XXII, Rome, 1926, Part III, pp. 438 ff. It is to be noted that suicide in Soviet Russia did not increase during the first period of the revolution, in spite of the terrible conditions and the suffering of the Russian population. But in the second—the decaying—period of the revolution, when individuals began to reenter their individual shells the suicide rate began to rise very rapidly. From 1923 to 1926 the number of suicides increased from 4,265 to 6,417. This is in complete agreement with the theory stated above: the first part of a revolution is usually marked by a decrease of suicides and the second part by an increase, as a result of an increase of isolation. See *Ten Years of Soviet Power in Figures* (in English), official publication of the Central Statistical Board of Soviet Russia, Moscow, 1927.

The progress of urbanization and the development of better means of communication tend to obliterate many differences between the city and the country and to bring the rural population more under the influence of the city. Can we wonder, therefore, that the rural and urban rates of suicide in several countries are tending to become equal? Although identical rates have not been established, yet in many countries equality of rates may be expected. Unfortunately, however, the tendency towards equalization of the rates is expressed not in a lowering of the urban rate but in an increase of the rural rate to the level of that of the city.

B. A COMPARISON OF THE LONGEVITY AND MORTALITY OF RURAL AND URBAN POPULATIONS

When the comparison is made after proper standardization according to age and sex in each group, it is quite evident that a longer duration of life or lower mortality indicates better health, whether due to heredity, environment, or to both. It is possible to state with a reasonable degree of certainty that in the past the duration of life was lower and mortality rates higher in the cities than in the country. All the evidence points to this conclusion. No competent investigator questions it.[11]

[11] For facts and data concerning ancient Rome see W. R. Macdonell, "On the Expectation of Life in Ancient Rome, and in the Provinces of Hispania and Lusitania, and Africa," *Biometrika,* IX, 366–380 (October, 1913); Robert von Pöhlmann, *Die Übervölkerung der antiken Grossstädte in Zusammenhange mit der Gesammtentwickelung städtischer Civilisation,* Leipzig, 1884, p. 115 and *passim.* For data on the Middle Ages and subsequent centuries see John Graunt, *Natural and Political Observations Mentioned in a Following Index, and Made upon the Bills of Mortality,* London, 1665, pp. 75 ff., 139–141 ff.; William Petty, *Tracts Chiefly Relating to Ireland,* printed by Boulter Grierson, 1769, Essays II and III, p. 132; Gregory King, *Natural and Political Observations and Conclusions upon the State and Condition of England,* 1696; George Chalmers, *An Estimate of the Comparative Strength of Great Britain; and of the Losses of Her Trade from Every War since the Revolution,* London, 1802, p. 420; Edmund Halley, "An Estimate of the Degrees of Mortality of Mankind . . .," Philosophical Transactions of the Royal Society of London, XVII, 596–610 (1693); Antoine Déparcieux, *Essai sur les probabilités de la durée de la vie humaine,* Paris, 1746, pp. 40 ff., 92 ff.; Johann P. Süssmilch, *Die göttliche Ordnung in den Veränderungen des menschlichen Geschlechts aus der Geburt, dem Tode, und der Fortpflanzung desselben erweisen,* Berlin, 1775–1776, I, 79 ff.; II, 312; and Ibn-Khaldun, "Prolégomènes historiques," *Notices et extraits des manuscripts de la Bibliothèque Impériale,* Paris, 1862, Vol. I. See selections from these works in the second chapter of this publication. See further Émile P. Levasseur, *La population française,* Vol. II, Paris, 1891, pp. 155, 240–242, 401 ff.; Robert R. Kuczynski, *Der Zug nach der Stadt,* Stuttgart, 1897, pp. 161–284; Harald L. Westergaard, *Die Lehre von der Mortalität und Morbidität,* Jena, 1901, pp. 395–571; Richard Thurnwald, *Stadt und Land im Lebensprozess der Rasse,* Berlin, 1904, pp. 566 ff.; Johannes Wernicke, *Das Verhältnis zwischen Geborenen und Gestorbenen in historischer Entwickelung und für die Gegenwart in Stadt und Land,* Jena, 1889, pp. 57 ff., 90 ff.; J. H. Kohlbrugge, "Stadt und Land als biologische Umwelt," *Archiv für Rassen- und Gesellschafts-Biologie,* VI, 493–511, 631–648 (1909); Carl Ballod, *Die*

I. CRUDE MORTALITY RATES

The situation has been more complex since the end of the nineteenth century. A series of factors such as the enormous hygienic and sanitary improvements in the cities, the general spread of this knowledge, and the consequent improvement in the standard of living of the people has decreased death rates in general and in the cities in particular. As a result the crude death rate in many cities at present is lower than in the country. This has led many authors to conclude that the urban death rate is now lower than the rural, that the longevity of the city population is greater than that of the country population, and that, therefore, the health of the city population, as indicated by the data of mortality and longevity, is better than that of the country.

When examined more carefully, however, these opinions are discredited; either the methods are faulty or the data are insufficient. It is almost unnecessary to state that the use of crude death rates is absolutely misleading. Crude rates have no scientific value in a study of this problem. When the data of these investigations are based upon sounder methods, i.e., standardized data, these conclusions are not essentially different from those of authors of earlier periods. On the whole the data prove the greater longevity and lower mortality of the agricultural population as compared with the urban.

From a series of investigations the conclusion is drawn that the average length of life among farmers and peasants is greater than among most of the urban classes. In America the average age at death of farmers and farm laborers included in a recent study was 58.5 years, that of all other occupational workers was 47.9 years.[12]

In Italy the proportion of persons of all occupational groups who died at the age of 65 and over per 100 deaths at the age of 25 and over was 55 in 1905 and 57 in 1913. Corresponding rates among the agricultural occupations were 58 and 63, respectively. In other words, the longevity of the agricultural group was sig-

mittlere Lebensdauer in Stadt und Land, Leipzig, 1899; Adna F. Weber, *The Growth of Cities in the Nineteenth Century: A Study in Statistics,* New York, 1899, pp. 233 ff.; G. B. Longstaff, "Rural Depopulation," *Journal of the Royal Statistical Society,* LVI, 380–433 (September, 1893); William Ogle, "The Alleged Depopulation of the Rural Districts of England," *ibid.,* LII, 205–240 (June, 1889); and E. G. Ravenstein, "The Laws of Migration," *ibid.,* LII, 241–305 (June, 1889). Other literature is cited in these works.

[12] Dublin, *op. cit.,* p. 65.

nificantly higher than the average duration of life among workers in all occupations.[13] In Russia the average duration of life of the peasants has also been greater than that of the majority of the urban occupational classes.[14]

In the United States even the crude death rate of the cities in the registration area, although it tends to approach the rural rate, still remains slightly higher, as is shown in the table below. The term "rural" here includes communities under 10,000 and the open country.[15]

RATE OF DEATH FROM ALL CAUSES (EXCLUSIVE OF STILLBIRTHS) PER 1,000 ESTIMATED POPULATION IN THE UNITED STATES, 1918–1924

YEAR	CITIES IN REGISTRATION STATES	RURAL DISTRICTS IN REGISTRATION STATES
1924	12.8	10.9
1923	13.2	11.5
1922	12.7	11.0
1921	12.3	10.9
1920	14.1	11.9
1919	13.9	11.9
1918	19.9	16.3

When crude death rates yield these figures, it is to be expected that death rates standardized according to the number of survivors of various ages per 1,000 births will show a conspicuously lower death rate and consequently greater longevity of the rural population. The 1909–1911 United States life tables depict this very clearly.[16] Warren S. Thompson, who computed the data for more recent years, obtained similar results (see page 124).[17]

[13] Francesco Coletti, *La popolazione rurale in Italia,* Piacenza, 1925, p. 67. (See the readings in this chapter.)

[14] S. Novoselsky, *Mortality and Duration of Life of the Russian Population* (Russ.).

[15] Bureau of the Census, *Mortality Statistics,* 1924, p. 12. For other data see pages 84–89. See also Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 182–184.

[16] See Arthur Newsholme, *The Elements of Vital Statistics in Their Bearing on Social and Public Health Problems,* London, 1924, p. 255; Sorokin and Zimmerman, *op. cit.,* p. 184; Arthur Newsholme, "National Change in Health and Longevity," *Journal of the American Statistical Association,* XVII, 703 (June, 1921).

[17] Warren S. Thompson, "Rural Demography," Publications of the American Sociological Society, XIX, 154.

NUMBER OF SURVIVORS (WHITE) OF VARIOUS AGES PER 100,000 LIVE BIRTHS IN THE UNITED STATES, 1920

VARIOUS AGE GROUPS	FOURTEEN LARGE CITIES	FIVE STATES* HIGHLY URBANIZED AND INDUSTRIALIZED	FIVE STATES† LESS INDUSTRIALIZED	FIVE STATES‡ PREDOMINATELY AGRICULTURAL
1 year				
Males	90,476	90,584	91,643	93,161
Females	92,416	92,500	93,389	94,330
12 years				
Males	84,109	85,147	86,716	88,720
Females	86,769	87,592	88,912	90,326
22 years				
Males	81,103	82,243	83,669	85,704
Females	83,814	84,878	85,914	87,286
32 years				
Males	78,382	77,517	79,398	81,146
Females	78,577	79,802	80,615	81,627
42 years				
Males	70,031	71,579	74,146	75,999
Females	73,042	74,417	75,266	75,679
52 years				
Males	60,959	63,665	67,642	69,953
Females	65,351	67,402	68,932	69,463
62 years				
Males	46,395	50,727	56,702	59,791
Females	52,557	55,386	58,643	59,743
72 years				
Males	26,260	31,255	31,715	41,486
Females	32,411	35,618	40,599	42,512

* Connecticut, Massachusetts, New York, New Jersey, Pennsylvania.
† Illinois, Indiana, Ohio, Michigan, Wisconsin.
‡ Kansas, Kentucky, Minnesota, North Carolina, Tennessee.

If these figures are read from left to right it will be seen that at almost all ages the number of survivors, male and female, increases, or the death rate decreases, as we pass from the large cities to more rural parts of the United States.[18] The data of a

[18] That a proper standardization in age composition of rural populations lowers the rural crude death rate very significantly is also shown by a series of special studies. For instance, Dr. Dwight Sanderson found the crude death rate for the farm population

computation made by Pascal K. Whelpton are similar.[19] The female death rate in the cities is relatively lower than the male. But on the whole even the crude death rate of females is higher in the cities than in the country. This higher rate is still more conspicuous when the death rate is standardized, in spite of the fact that some age groups of females have a lower death rate in the city.

II. INFANT MORTALITY RATES

Contrary to the assertions of some authors,[20] in most countries the urban rate of infant mortality is still higher than that of the rural districts. The data below depict the situation in the United States.[21]

MORTALITY RATES AMONG INFANTS UNDER ONE YEAR IN THE ORIGINAL BIRTH REGISTRATION AREA (EXCLUSIVE OF RHODE ISLAND)

REGION	NUMBER OF DEATHS PER 1,000 LIVE BIRTHS						
	1924	1923	1922	1921	1920	1919	1915
Rural districts	70	82	76	79	85	87	103
Cities	72	78	81	78	92	90	94

If we take the whole area of the states with compulsory registration the results appear as follows:[22]

The data prove that infant mortality in the United States is still higher in the city than in the country, in spite of the fact that the method of computation, based on the ratio of deaths to 1,000 live births, is likely to give fictitious determinations that are favorable to the city but are unduly unfavorable to the country.[23] In spite of this, the data disclose the fact that infant mortality is low-

of Cortland County, New York, from 1911 to 1920 to be 15 per 1,000, while the standardized rate for the same population was only 10.7. See Dwight Sanderson, *A Survey of Sickness in Rural Areas in Cortland County, New York,* Cornell University Agricultural Experiment Station, March, 1928, p. 13.

[19] Pascal K. Whelpton, "Population of the United States, 1925 to 1975," *American Journal of Sociology,* XXXIV, 259 (September, 1928).

[20] See Robert M. Woodbury, *Infant Mortality and Its Causes,* Baltimore, 1926, p. 19.

[21] United States Bureau of the Census, *Birth, Stillbirth, and Infant Mortality Statistics, 1924,* p. 31. Dr. Woodbury, in his careful investigation, took only the data for 1915 and 1921.

[22] *Ibid.,* p. 31. The original area includes only those states having compulsory registration before 1915. The whole area includes also the newer states.

[23] See Sorokin and Zimmerman, *op. cit.,* p. 186.

Rates of Survival in the United States per 1,000 Live Births for the Five-Year Term 1920–1924, and Estimated Future Rates

Age Division	Native White							Negro						
	1920–1924			1945–1949		1970–1974		1920–1924			1945–1949		1970–1974	
	Total	Urban	Rural	Urban	Rural	Urban	Rural	Total	Urban	Rural	Urban	Rural	Urban	Rural
0–4	954	950	958	963	969	971	976	933	917	938	940	957	951	964
5–9	988	987	989	989	991	992	993	982	976	984	979	986	982	989
10–14	988	987	988	989	990	991	992	973	967	975	971	979	975	982
15–19	981	981	981	985	985	987	987	953	950	955	955	960	960	965
20–24	976	975	977	979	981	983	985	943	946	941	951	946	956	951
25–29	972	969	975	974	979	979	981	939	943	936	948	941	953	946
30–34	969	965	974	971	978	977	980	934	933	935	939	940	945	945
35–39	967	961	973	967	977	974	979	929	926	932	932	937	939	942
40–44	962	952	973	960	975	968	978	920	912	925	920	930	928	935
45–49	952	938	967	946	969	954	972	904	886	916	894	921	902	926
50–54	934	914	954	924	958	934	960	877	847	897	857	902	867	907
55–59	905	878	931	888	935	898	937	849	809	869	819	873	829	875
60–64	860	826	892	836	896	846	898	811	761	836	771	840	781	842
65–69	790	751	823	761	827	771	829	748	688	778	698	782	708	784
70–74	692	660	718	670	722	680	724	675	635	695	645	699	655	701
75–79	558	539	571	549	576	559	581	572	543	585	543	585	543	585
80–84	406	396	412	406	417	416	422	444	424	452	424	452	424	452
85–89	258	246	264	261	274	276	284	334	316	340	316	340	316	340
90–94	159	120	175	135	185	150	195	242	231	247	231	247	231	247
Expectation of life	57.9	55.4	60.4	60.3	64.7	63.0	66.6	46.5	43.4	48.1	48.3	52.7	51.1	55.0

MORTALITY RATES AMONG INFANTS UNDER ONE YEAR IN ALL REGISTRATION STATES AND CITIES OF 25,000 INHABITANTS OR MORE, 1919–1924

CLASS OF POPULATION	NUMBER OF DEATHS PER 1,000 BIRTHS					
	1924	1923	1922	1921	1920	1919
White:						
Cities	69	75	77	75	87	86
Rural districts	65	72	69	70	76	80
Colored:						
Cities	127	138	127	128	158	148
Rural districts	105	106	102	100	118	123
Both classes:						
Cities	72	78	80	78	91	89
Rural districts	69	76	72	74	81	84

er in the rural districts. This conclusion is further strengthened by the fact that stillbirths are proportionately less numerous in the country. Stillbirth is an important index of the virility of parents and of their progeny. The relevant statistics show definitely that in practically all countries the rate of stillbirths is higher in the city than in the rural areas. In 1924 the rate in the United States registration area was 3.9 per 100 live births among the whites in the cities and 3.2 among those in the rural districts; 8.8 among the colored inhabitants of the cities and 7.0 among those in the country.[24] The ratios during the preceding years in this, as well as in other countries, have been similar. This difference between country and city exists in most countries today.[25]

[24] See the Bureau of the Census, *Birth, Stillbirth, and Infant Mortality Statistics, 1924*, p. 25.

[25] For data of earlier writers see Levasseur, *op. cit.*, II, 53, and von Mayr, *op. cit.*, III, 108; for data of current writers see, for Germany, *Statistisches Jahrbuch für das Deutsche Reich*, 1926, Berlin, pp. 25, 29; for Bavaria, *Statistisches Jahrbuch für den Freistaat Bayern*, 1919, Munich, p. 55; for Bulgaria, *Annuaire statistique du royaume de Bulgarie*, 1926, Sofia, p. 77; for Italy, Ugo Giusti, *Le grandi città italiane*, Florence, 1925, p. 16; for Belgium, *Annuaire statistique de la Belgique*, 1927, p. xxxiv; for Poland, *Annuaire statistique de la République Polonaise*, 1927, Warsaw, p. 95; for Switzerland, *Statistisches Jahrbuch der Schweiz*, Bern, pp. 59, 92; for France, *Annuaire statistique*, 1910, Paris, pp. 23–33; for Sweden, *Statistik Årsbok för Sverige*, 1927, Stockholm, p. 46; for Holland, *Jaarcijfers voor Nederland*, 1925–1926, The Hague, p. 19; for Denmark, *Statistisk Aarbog*, 1926, Copenhagen, pp. 22–24. For the sake of brevity the actual figures are omitted here, but they may be found in the sources indicated. They show without any exceptions that in all these countries the percentage of stillbirths is higher in cities than in rural districts. Only in Holland and Denmark is the difference insignificant; in all other countries it is consistent and tangible.

These conclusions may be drawn also for countries other than the United States. Below we give some representative standardized data.[26] These figures need no interpretation. The second of the tables gives fairly recent data on rural-urban infant mortality in England.[27]

AVERAGE ANNUAL DEATH RATE OF CHILDREN UP TO FIVE YEARS OF AGE IN GREAT BRITAIN, 1911–1914

AGE GROUP	ENGLAND AND WALES	LARGE TOWNS	RURAL DISTRICTS
0–1 year (per 1,000 births)	110.0	122.0	90.0
1–5 (per 1,000 survivors at each age)			
1–2	33.4	41.8	20.6
2–3	13.6	17.2	8.3
3–4	8.4	10.3	5.5
4–5	6.3	7.5	4.6
0–5 years (per 1,000 births)	164.0	188.0	125.0

INFANT MORTALITY IN URBAN DISTRICTS, EXPRESSED AS A PERCENTAGE OF THAT IN RURAL DISTRICTS OF GREAT BRITAIN, 1911–1927

PERIOD	0–1 MONTH	1–3 MONTHS	3–6 MONTHS	6–9 MONTHS	9–12 MONTHS	TOTAL UNDER ONE YEAR
1911–1915	104	133	145	149	157	128
1916–1920	102	129	146	144	154	122
1921–1925	102	124	147	151	160	122
1926	103	121	147	147	157	121
1927	102	110	142	136	139	115

III. COMPARATIVE MORTALITY RATES

The table above shows that urban rates are consistently higher according to recent data. It is noticeable that as we pass from "0–1 month" to "9–12 months," the urban as compared with the rural rates become even greater. This suggests that the excellent medical

[26] Newsholme, *op. cit.*, p. 343.

[27] Registrar-General's Statistical Review of England and Wales, 1927, London, 1929, p. 12. See also the Eighty-second Annual Report of the Registrar-General for England and Wales, 1919, London, 1920, pp. xliv-xlv. In Scotland and Ireland in 1918 and 1919 the rates of infant mortality were conspicuously lower in country districts than in larger burghs, smaller burghs, or urban districts. See the Sixty-fifth Annual Report of the Registrar-General for Scotland, 1919, Glasgow, 1920, Table 36; and the Fifty-sixth Annual Report of the Registrar-General for Ireland, 1919, Dublin, 1920, p. xxxi.

care and other facilities in the cities permit many weaklings to survive for a time, but that larger proportions of infant deaths occur in the later months. A comparison of the rural and urban mortality of the older age groups in England and Wales from 1891 to 1914 is presented below.[28] The table shows that the death rate

URBAN MORTALITY (FROM ALL CAUSES) AS COMPARED WITH RURAL MORTALITY IN ENGLAND AND WALES, 1891–1914

(The mortality in each age group of the rural counties is represented by 100)

AGE	1891–1900		1901–1910		1914	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
All ages	137.9	134.7	134.0	132.1	....	....
0	155.2	161.7	152.8	160.0	152.0	156.6
5	137.1	135.9	132.9	134.5	134.7	142.9
10	117.2	103.7	119.0	113.1	127.1	124.0
15	111.8	92.1	111.9	94.8	122.0	101.2
20	96.7	93.1	95.4	91.2	113.1	97.6
25	114.9	106.9	108.4	102.0	114.4	98.2
35	146.5	134.4	133.4	128.7	146.1	118.8
45	155.1	146.5	150.0	142.1	154.6	....
55	145.9	140.1	141.8	137.4	153.8	134.2
65	130.8	127.1	129.0	124.6	135.8	120.6
75	107.5	107.4	108.1	107.9	125.2*	119.7*

* In 1914 the percentages for the age groups above 24 relate to the ages 25–30, 35–40, 45–50, 55–60, 65–70, 75–80.

in all age groups except that of 20–25 years among males and 15–25 among females is considerably higher in the cities than in the country. The slightly lower death rate in the age groups 15–25 years "might be due to a migration of the healthier and more ambitious lads and girls from the country to better paid work in towns—in other words to the weaker elements being left behind." [29]

Later we shall determine to what extent this hypothesis is probable. At present we see that the urban mortality rate is conspicu-

[28] The Supplement to the Seventy-fifth Annual Report of the Registrar-General for England and Wales, 1912, Part III, p. ccxii; Austin B. Hill, *Internal Migration and Its Effects upon the Death-Rates: With Special Reference to the County of Essex* (Privy Council, Medical Research Council, Special Report Series, No. 95), London, 1925, pp. 9 ff. For more recent data see the *Registrar-General's Statistical Review of England and Wales,* 1927, cited, and the reading in this chapter taken from the Registrar-General's Decennial Supplement, 1921, Part II.

[29] Hill, *op. cit.,* p. 13.

ously higher than the rural. Furthermore, when we compare the rural and the urban mortality rates during the years 1891–1900, 1901–1910, and 1914 it is evident that there was no definite trend towards a decrease of the discrepancy between the rural and the urban death rates in the course of these twenty-four years. Whereas the difference decreased in some age groups, it increased in others. This is true in particular of the rate in 1914. Only the

NUMBER OF SURVIVORS PER 1,000 AT THE AGE OF 12, IN THE RURAL AND URBAN DISTRICTS IN ENGLAND, 1910–1912

Age	Males			Females		
	County of London	Aggregate of Urban Districts	Aggregate of Rural Districts	County of London	Aggregate of Urban Districts	Aggregate of Rural Districts
12	1,000	1,000	1,000	1,000	1,000	1,000
15	993	994	995	994	994	994
20	980	979	982	982	981	981
25	963	962	965	970	966	965
30	942	942	947	954	949	947
35	913	920	925	934	929	926
40	875	881	901	906	905	903
45	825	856	870	869	875	877
55	685	744	783	763	784	801
65	480	522	625	598	623	663
75	233	277	360	351	362	416
85	48	61	87	97	99	125

difference for the ages 0–5 years shows a decrease, probably explained by the improvement in child welfare service. There is no consistent tendency of this sort in the other age groups. These figures, therefore, do not indicate at present a lower death rate in the cities than in the country. Neither do they substantiate the contention that the difference between urban and rural rates tends to disappear. The table above gives essentially similar data.[30]

This table shows that the number of survivors in all age groups (except females 20–40) is conspicuously greater in the rural districts than in the urban districts or in the County of London.

[30] Newsholme, *op. cit.*, p. 257. For similar data and many important details see the Supplement to the Seventy-fifth Annual Report of the Registrar-General for England and Wales, 1912, Part II, pp. 34, 50.

When the mortality rates of the eight large social classes of the English population or those of 178 occupational groups are compared with the rates of the English agricultural class, it is evident that the mortality rates of the farmer class in all the age groups between 25 and 65 are the lowest of all social classes.[31]

These data are sufficient to certify that in such a highly industrialized country as England or Wales, in spite of the relatively high standard of living of the urbanites, especially before the World War, the mortality rates are lower and the general health is remarkably better in the rural population than in the urban population. In view of the great proportion of urbanization and industrialization in England this is very significant.

IV. SUMMARY OF THE MORTALITY DATA FOR 1925–1927

The most recent data for the biennium from 1925 to 1927 for other countries may now be summarized briefly:

1. The infant mortality rate has been lower in the rural districts than in the urban in England, Wales, Scotland, Ireland, the United States, Denmark, Belgium, Sweden, British India, Poland, the Union of South Africa, the majority of the provinces of the Commonwealth of Australia, possibly New Zealand, a minority of the provinces of Canada, and France (when the rate of Paris is compared with that of 77 provinces). The rate in the rural districts is now higher than, or equal to, that in the urban in the Netherlands, Germany, a majority of the provinces of Canada, Switzerland, and possibly in Italy and Soviet Russia. The data permit the claim that on the whole rural infant mortality is certainly not higher than urban. If the rates were corrected to take account of stillbirths, the smuggling of illegitimates from the city into the country, the size of the family, and so on, probably several of the countries of the second group having higher rural rates of infant mortality would have less favorable percentages in the cities.

2. The comparative mortality of the rural and the urban population of both sexes and of all ages, in spite of numerous local variations, is on the whole higher in the cities than in the coun-

[31] See the paper of Stevenson cited and the readings from his report as registrar-general given in this chapter. Among other things this reading shows that the mortality of the agricultural classes is lower than that of other classes of the rural population in England.

try. This is evident from the crude rates for the United States, England, Wales, Scotland, New Zealand, the Union of South Africa, British India, Rumania, Spain, the Commonwealth of Australia, Denmark, Belgium, Poland, and possibly France. In other countries, Germany, Italy, the Netherlands, Sweden, Canada, Bulgaria, and Switzerland, the crude death rate at present is higher in the country than in the city. The situation changes, however, when the rates are standardized according to age and sex, or when the standardized death rate of the agricultural population is compared with that of other large occupational classes; or when the standardized expectation of life in the city is compared with that in the country. Several studies made in Germany, the Netherlands, France, and other countries leave no doubt that the standardized death rate of the agricultural class, in almost all age groups, is lower than that of urban occupational classes and that the standardized rural death rate of the majority of the age groups is lower than the urban rate. At present the expectation of life remains higher in the country than in the city. Thus, when the rates are corrected, the true mortality of the city must be recognized as greater than that of the country.

3. In comparing rural and urban rates we find a difference between males and females. As a rule, a comparison of the death rate of rural and urban men shows a greater difference in favor of the rural than does the comparative rate of females. Urban conditions seem to be less harmful to women than to men. In several countries the death rate among urban women at certain ages is equal to or lower than that of females in the rural districts. This difference is noted but no explanation of the cause is offered. There is no valid basis for the claim that the death rate of the country population is higher than that of the city population; in fact the opposite statement is nearer the truth.

4. There is a tendency in recent times for urban and rural infant death rates to approach each other. When only crude death rates are used, the rates of mortality in the adult groups in some countries also approach each other. In other countries such a tendency has not been evident.[32] However, such a trend in the crude

[32] The principal sources on which these conclusions are based are, for the United States, England, Wales, Scotland, and Ireland, the sources cited above; for Germany: *Statistisches Jahrbuch für den Preussischen Staat,* 1911, Berlin, p. 34; Johannes Müller, *Deutsche Bevölkerungstatistik,* Jena, 1926, pp. 222–223; Carl Ballod, *Grundriss der*

death rate does not indicate that the health, or the longevity, of the adult urban population improves more rapidly than that of the rural population. The propensity of the rural-urban crude death rates to approach each other is due mainly to the more rapidly falling birth rate of the cities, to the migration of adult age groups from the country to the city, and therefore to the more rapid decrease in the proportion of infants and individuals in the younger age groups in the city population taken as a whole. This same sort of explanation applies also to the extension of the average life expectation, which is quite wrongly interpreted by popular writers.[33]

5. There are enormous contrasts in the mortality rates of the various urban classes: the rich and the poor; the professionals, the unskilled, and the semiskilled; and the upper and the lower social classes. The difference between the death rates of these classes is probably greater than that between the death rates of the city and

Statistik enthaltend bevölkerungs-, wirtschafts-, finanz- und handels-statistik, Berlin, 1913, pp. 58–63, and *Sterblichkeit und Lebensdauer in Preussen,* Berlin, 1907; Prinzing's paper in the *Handbuch der soziale Hygiene,* I, 163 ff.; *Statistisches Jahrbuch für den Freistaat Bayern,* 1919, p. 64; *Statistisches Jahrbuch für das Deutsche Reich,* 1927, pp. 42, 44; *Statistisches Jahrbuch deutscher Städte,* 1927, pp. 342–343; and Gustav Tugendreich, "Der Einfluss der sozialen Lage auf Krankheit und Sterblichkeit des Kindes," *Krankheit und soziale Lage,* ed. by M. Mosse and G. Tugendreich, Munich, 1913, p. 301; for the Union of South Africa: Official Year Book of the Union of South Africa, 1910–1925, Pretoria, 1927, pp. 904–905, 917; for New Zealand: New Zealand Official Yearbook, 1927, Wellington, pp. 148–152; for France: Lucien March, "Some Researches concerning the Factors of Mortality," *Journal of the Royal Statistical Society,* LXXV, 524–525 (April, 1912); *Annuaire statistique,* 1910, pp. 16, 24; for Canada; Canada Year Book, 1926, pp. 164–167; Statistical Yearbook of Quebec, 1926, p. 81; for the Commonwealth of Australia: Official Yearbook of the Commonwealth of Australia, 1926, Melbourne, p. 931; *South Australia Statistical Register,* Adelaide, 1927, pp. 29, 35; for British India: *Statistical Abstract for British India,* London, 1925, pp. 326–327; for Russia: S. Novoselsky, *Mortality and Duration of Life of the Russian Population* (Russ.); *Annuaire statistique* (of Soviet Russia), 1922–1923, pp. 351–352; *Vital Processes of the Population of the U.S.S. Republics,* 1923–1925, Moscow, 1928, pp. xxxi–xxxvii; for Poland: *Annuaire statistique de la République Polonaise,* p. 95; for Denmark: *Statistisk Aarbog,* 1922, p. 22; 1926, pp. 22–23; for Belgium: *Annuaire statistique de la Belgique,* 1927, pp. xiv–xxxix; for Italy: *Annuario statistico italiano,* 1926, pp. 18, 28; Ugo Giusti, *Le grandi città italiane,* p. 17; Francesco Coletti, *La popolazione rurale in Italia,* p. 65; for Rumania: *Annuaire statistique de la Roumanie,* 1926, Bucharest, p. 21; for Switzerland: *Statistisches Jahrbuch der Schweiz,* 1924, pp. 51, 66, 95; for Sweden: *Statistisk Årsbok för Sverige,* 1927, pp. 46, 65; for the Netherlands: *Jaarcijfers voor Nederland,* 1925–1926, pp. 20–22; Franz Koelsch, "Berufsmorbidität und Mortalität," *Handbuch der soziale Hygiene,* Vol. II, p. 222; "Statistiek van de sterfte onder de mannen van 18–65 jaar," *Bijdragen tot de Statistiek van Nederland,* N.V., The Hague, 1917, p. 247; Friedrich Prinzing, "Die Sterblichkeit nach dem Beruf in den Niederlanden," *Archiv für sozialen Hygiene und Demographie,* Vol. XIII (1919); for Bulgaria: *Annuaire statistique du royaume de Bulgarie,* 1926.

[33] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 190–193.

the country as a whole.[34] The statement of Dr. Woodbury that "a study of mortality in different cities indicated wide variations in rates, while in rural areas variations were much less marked" stresses this same fact.[35] The city population has more variable rates than the country population.

6. These conclusions on rural-urban mortality and duration of life are consistent with the data of the medical examinations of recruits and in part the studies of school children, the comparative morbidity data, and the rates of suicide. All these data and the additional data of comparative longevity and mortality are uniformly consistent in showing that on the whole the health and vitality of the rural classes is not poorer than that of the urban population; in fact it is somewhat better.

V. FACTORS IN THE LOWER RATE OF RURAL MORTALITY

What factors are responsible for the lower mortality of the rural population as compared with the urban? We shall omit a detailed analysis of the problem and present only the pertinent conclusions.[36]

A general prerequisite for understanding the reason why rural mortality is on the whole somewhat lower than urban is an admission that the innate health and vitality of the rural population in general is not poorer than that of the urban population. The data do not contradict this admission but they do contradict sharply the hypothesis that the innate health of migrants to the cities is better than that of those who remain in the country. This hypothesis and that of the poorer innate health of the rural population are not valid. Nor is there conclusive evidence that the innate health of the rural population is better; the admission that their health is at least as good as that of people in the cities does not explain the lower rate of rural mortality. In order to understand this we must turn to an analysis of the environmental factors in urban and rural populations.

The fact that the death rate in the country is equal to or lower than that in the city is not attributable to such environmental factors as medical care, hygiene, geographic conditions,

[34] See the data and the literature cited in Pitirim A. Sorokin, *Social Mobility*, chap. xi, and *Contemporary Sociological Theories*, pp. 349 ff.

[35] Woodbury, *op. cit.*, p. 26.

[36] For details see Sorokin and Zimmerman, *op. cit.*, pp. 194–203.

order of birth, size of family, or birth rate, in all of which the urban population seems to have an advantage over the rural. Yet the rural rates are lower, and we are forced to the conclusion that either the hypotheses concerning the influence of these factors are inadequate or their effects are counteracted by the interference of other causes.

There are several factors that seem not only to be responsible for the relatively lower rural mortality rate but that also seem to be sufficient to counterbalance the effects of the environmental factors lowering urban death rates: lower density of population in the country; greater integrity of the rural family; greater maternal care of the child in the rural family; the outdoor character of agricultural work; better country air; more healthful nature of agricultural work; "the greater peace of mind" of the rural people (because of the specific characteristics of the rural environment); and finally, a generally better adaptation of human beings to the rural environment. The urban milieu, relatively new, differs from the rural environment in which the great majority of mankind has lived for thousands of years and to which it has become adjusted. The urban milieu, therefore, is still not sufficiently adapted to the needs of human beings, nor are the needs sufficiently adapted to it.

C. RURAL-URBAN BIRTH RATES AND VITALITY

I. COMPARATIVE FERTILITY RATES

The final criterion of vitality is the birth rate. It is evident that crude birth rates, like the crude death rates, are misleading. The true rural-urban difference in birth rates may be determined only when the populations compared are standardized, at least according to age and sex. The birth rates in both groups must be computed according to the same age and sex groups. In spite of the fact that even the crude birth rate in the rural parts of most countries is higher than that in the cities,[37] we shall proceed directly to studies based on standardized rural-urban birth rates. These show the rural birth rate to be higher than the urban.

The 1925 volume of birth statistics gives standardized birth rates for the United States. They are computed according to the

[37] Sorokin and Zimmerman, *op. cit.*, pp. 205–209.

age of the mother and the occupation of the father. The table below presents some of the chief percentages.[38]

BIRTHS ACCORDING TO OCCUPATION OF THE FATHER AND AGE OF THE MOTHER FOR THE UNITED STATES REGISTRATION AREA

OCCUPATION OF FATHER	BIRTHS ACCORDING TO AGE OF MOTHER		
	All Ages	0–20 Years	40–44 Years
All occupations	3.3	1.3	7.4
Agriculture, forestry, and animal husbandry	3.9	1.3	8.1
Mining	4.1	1.4	8.9
Manufacture and mechanical trades	3.2	1.3	7.4
Transportation	2.9	1.3	6.8
Trade	2.9	1.2	6.1
Public service	2.9	1.2	4.9
Professional service	2.3	1.2	4.9
Domestic and personal service	2.9	1.2	6.5
Clerical work	2.1	1.1	5.2

These data reveal that the rate of fertility of agriculturists as a class is surpassed only by that of miners. No further explanation is needed.

The table below gives the comparative crude and standardized birth rates of the rural and urban classes in England in 1912 and 1927.[39]

BIRTHS IN RURAL AND URBAN DISTRICTS IN ENGLAND, 1912 AND 1927

AREA	COMPARATIVE RATES (1927)	PER 100,000 POPULATION, 1912	PER 10,000 WOMEN 15–45 YEARS OF AGE, 1912	
			Total Number	Surviving to Age 5
All areas	1,000	2,382	956	817
London	941	2,468	918	784
County boroughs	1,003	2,518	977	805
Other urban districts	961	2,536	928	808
Rural districts	1,116	2,209	993	883

[38] Bureau of the Census, *Birth, Stillbirth, and Infant Mortality Statistics, 1925.* See also Sydenstricker and Notestein's "Differential Fertility According to Social Class," *Journal of the American Statistical Association,* March, 1930.

[39] *Registrar-General's Statistical Review of England and Wales,* 1927, p. 121; Seventy-fifth Annual Report of the Registrar-General for England and Wales, 1912, p. xli.

It is clear that the higher crude birth rates in the cities do not indicate either a greater fertility among women of childbearing age or a greater number of survivors at the age of five. The higher proportion of marriageable persons in the city produces a higher crude birth rate, but the number of births per 10,000 women of childbearing age is less. In the agricultural occupations in 1921 there was a rate of 114[40] in comparison with a general expectancy of 100 based on all married men of England of the same age group. In only 5 minor classes out of 32 were the rates higher. The table below presents these data.[41]

Occupational Groups with Higher and Lower Fertility Rates than Agriculturists, Great Britain Census, 1921

Occupation	No. of Children per 100 of All Married Men of Same Age Group
All married men of Great Britain	100
Miscellaneous occupations (chiefly labor)	124
Making coke, lime, and cement	123
Mining and quarrying	120
Making bricks, pottery, and glass	116
Building and bricklaying	115
Working in chemicals and paints	115
Agriculture	114
Unclassified	111–101
Remaining occupations	98– 75

In this table the chief groups approaching or exceeding the agriculturists in fertility are miners and city laborers. Similarly, the census of Scotland in 1911 shows that the fertility of the agricultural workers and that of miners, crafters, and fishermen is higher than that of the sixty other occupational groups.[42]

In 1860 Maurice Block in a study for France found the number of births per marriage in 1853 to be 2.31 for Paris, 3.24 for the urban population as a whole, and 3.28 for the rural population.[43]

[40] See *Occupational Mortality, Fertility, and Infant Mortality,* Registrar-General's Decennial Supplement, England and Wales, 1921, Part II, London, 1927, p. ciii.

[41] Census of England and Wales, 1921, General Report, p. 183.

[42] See James C. Dunlop, "The Fertility of Marriage in Scotland: A Census Study," *Journal of the Royal Statistical Society,* LXXVII, 259–288 (February, 1914).

[43] Maurice Block, *Statistique de la France comparée avec les autres états de l'Europe,* Paris, 1860, I, 61 ff.

Additional data for France are given in the paper of Meuriot in the readings. Finally, we present the data for 1906.[44]

NUMBER OF CHILDREN PER 100 FAMILIES ACCORDING TO DURATION OF MARRIAGE AMONG RURAL AND URBAN GROUPS IN FRANCE, 1906

CLASS	TOTAL BIRTHS ALL DURATIONS	TOTAL SURVIVORS	BIRTHS PER DURATION OF MARRIAGE			
			0–4 Years	5–14 Years	15–24 Years	25 or More Years
Employers:						
Agriculture	307	246	98	249	340	371
All occupations .	292	231	94	235	327	370
Laborers:						
Agriculture	298	234	91	252	380	426
All occupations .	281	216	94	241	362	422

Thus it is clear that the real fertility of the agricultural classes was higher, whether measured by births or by survivals.

In Switzerland during the past fifty years the standardized birth rates per 1,000 women of marriageable age (15–49 years) have been thus.[45]

LEGITIMATE FECUNDITY IN SWITZERLAND DURING THE PAST FIFTY YEARS (PER 1,000 WOMEN 15–49)

TYPE OF AREA	1871–1890	1891–1900	1901–1910	1911–1920
Industrial	225	221	191	146
Mixed	247	248	235	204
Agricultural	257	266	265	255

These data indicate a high positive correlation between ruralization and the birth rate for all groups of years. They reveal also that the urban standardized fertility has been falling much faster than the rural and that the difference in rural-urban fertility is much greater now than it was in the period from 1871 to 1890.

In 1920 the Norwegian government made a study of the fertility of various classes and groups. The rates were based on the number of years women had been married. It was found that, on the average, rural parents married 9 years had 3 children, whereas

[44] *Annuaire statistique* (of France), 1910, XXX, 19.

[45] *Statistisches Jahrbuch der Schweiz*, 1926. Stillbirths are included before 1901.

the urban family did not have 3 children until after 13 years of married life. The rural family had 4 children after 13 years of married life, but the urban family did not have 4 children until after 19 years. Of the several occupational groups fishermen had the largest families (7.06 in marriages over 18 years); agriculturists had the next largest families; and the higher functionaries and members of liberal professions had the smallest (4.24). In each city there were fewer children per family than in the families of the surrounding territory. Rural and urban differences in fertility were minor ones before 1890, but thereafter the urban rate declined more rapidly. The country birth rate declined 14.1 per cent between 1900 and 1920, while the city rate declined 27.9 per cent. These historical conclusions were based upon the standardized rate from 1865; no data were presented covering earlier periods, because less than 20 per cent of the population lived in cities previous to 1880.[46]

The situation in Belgium is depicted by the following figures.[47] The situation in Germany has been similar.[48]

LIVE BIRTHS PER 1,000 WOMEN 15–50 YEARS OF AGE IN BELGIUM

YEAR	CITIES, 20,000 OR MORE	REST OF KINGDOM
1880	241.5	266.5
1890	206.3	248.0
1900	174.2	230.5

The Australian Census of 1911 found the net issue of parents in the occupations of agriculture, forestry, and fishery to be higher in all age groups than in any other occupation except the "independent" class.[49]

Finally, the crude birth rates of predominantly agricultural countries have been higher than those of predominantly urbanized and industrialized countries.

[46] These data are taken primarily from a summary by Jean Bourdon in the *Journal de la société de statistique de Paris*. The series runs from November, 1925, to January, 1926. Some of the data are presented in the *Statistisk Aarbog för kongeriket Norge*, 1925, Christiania, p. 19.

[47] Georg von Mayr, *Statistik und Gesellschaftslehre*, III, 123.

[48] *Ibid.*, p. 72.

[49] Census of the Commonwealth of Australia, 1911, Melbourne, I, 287.

The table below gives the crude birth rates per 1,000 population in various countries during the years from 1908 to 1913.[50]

CRUDE BIRTH RATES PER 1,000 POPULATION IN VARIOUS COUNTRIES, 1908–1913

INDUSTRIALIZED COUNTRIES		AGRICULTURAL COUNTRIES	
Germany	29.5	Russia	45.5*
England and Wales	24.9	Bulgaria	41.0
France	19.5	Serbia	38.2
Switzerland	24.7	Rumania	43.1
Belgium	23.4	Hungary	36.0
Austria	31.9	Italy	32.4
Norway	26.0	Portugal	34.6
Sweden	24.4	Argentina	37.5
New Zealand	26.2	Costa Rica	43.4
United States	25.1†	Chile	37.3
		British India	38.3

* European Russia, 1911–1913.
† 1915.

All the highly industrialized countries have rates far below the strictly agricultural countries. If standardized rather than crude birth rates had been taken, the difference would have been still greater. It is significant in this connection that there was an enormous decline in the birth rate in past societies, in ancient Rome and Greece, when urbanization became great.

These data justify the following conclusions: 1. The birth rate of the rural and agricultural populations is generally higher than that of most large urban occupational classes. 2. Because of the nature of social organization in rural-urban countries the greatest increase in population occurs in rural districts. The surplus-population pushes out into the cities like water seeking its level. This migration takes place between countries as well as between areas in the same country. 3. Such movements as these result in the continual replacement of the urban population by the rural. In other words, the rural population of today is the urban population of tomorrow. Except in periods of catastrophe the opposite movement does not occur. 4. As a result of this replacement, the bio-

[50] *Annuaire international de statistique,* 1917, The Hague, pp. 2–3; 1920, pp. 2–5; *Mouvement de la population de l'U. S. S. R.—1923–25,* Moscow, 1927, p. xxi.

logical and environmental patterns of rural life are eventually one of the strongest determining factors in the make-up of society at large and of contemporary civilization. In society those persons who are born in farm homes and reared in rural environments, having a farmer and peasant biological background and character-moulds of special cultural patterns, when they enter the cities and urban life, prove to be the strongest determining human factor for good or for bad. The dilution and replacement of the urban by the rural population of the same country, or other countries and areas, is a constant and permanent occurrence.

II. FACTORS AFFECTING RURAL FERTILITY

A number of reasons are suggested as explanations of the rural and urban discrepancies in birth rates. We shall enumerate a few of these causes, although we shall not always be able to tell which are primary and which are of lesser significance.

The religious factor.—The most important factor in the higher rural birth rate is probably the familistic organization of rural society with the characteristic familistic religion and mores. (See the chapter on the family.) The traditional attitude of the Christian religion towards the family has been expressed in the biblical phrase, "multiply and replenish the earth." Birth control, therefore, and other means of the limitation of posterity, as well as sexual life outside legitimate marriage, have been strongly condemned by the church. The cities freed themselves from this attitude much earlier than the countryside. A considerable part of the city population opposes this traditional attitude of the Christian church but it is still accepted by the country population.

Furthermore, in many agricultural countries, in China, India, in some parts of the Balkan countries, and Russia, the cult of ancestors and the family composes a vital part of the religion of agricultural people. This cult makes it the primary duty of every man to leave as numerous a legitimate posterity as possible. Such beliefs and attitudes stimulate by all possible means the replenishment of the earth and produce the high birth rate of the rural people and countries. In a milder degree the cult of the family still has more influence in the country than in the city. The religious or moral factor, therefore, is one of the influences responsible for the higher birth rate.

The family factor.—Closely related to the factor of religion is that of the family. In the chapter on the family it is shown that the family has been the principal form of social organization among the peasants ever since the development of agricultural society. The family institution, as a union of parents and children and of husbands and wives, has been much more important economically, socially, morally, and biologically to the peasant class than to any other class of society. In the city the individual and his interests are considered first; in the country the interests of individual members should be and still are sacrificed to the family and its interests. In the city the monogamic family is considerably disorganized, but in the country it is much more alive, stable, and integrated. Shall we wonder then that the duty of prolonging the continuity of family history by having a large posterity has been much stronger in the country than in the city? We must add to this the familistic religion and the cult of ancestors and family; the feeling of sin and offense against society in the limitation of progeny; and the greater difficulty of sex satisfaction outside the family in the country than in the city. These conditions explain why the family has been one of the factors producing a higher birth rate among rural populations than exists among city populations.

The economic factor.—The next factor is economic. Numerous studies have shown that the birth rate tends to increase in periods of prosperity and to decrease in periods of depression. The coefficients of correlation between the birth rate and the business cycle range from .15 to .64 in various studies. Although there are many exceptions and the correlation may not be regarded in any way as universal, constant, or high, nevertheless, there probably is some connection between the birth rate and economic conditions.

The peculiar economic conditions of the agricultural class seem to be responsible, to some extent, for the higher rural birth rate. In the past, since aged parents needed to have children to care for them, the child was an economic necessity, because he was practically the sole support of the family. Furthermore, there were few employment agencies for women in the rural districts.

Children are not expensive to bear and rear in the country. (Farmer-peasants spend relatively less for medical services at childbirth.) They are soon old enough to furnish service and in-

come to the family by aiding in the agricultural work. They do not need child labor laws, since they work at home with their parents. Their primary needs, up to the time they are capable of helping about the farm and becoming self-supporting, are food, shelter, and rough clothing.

Since houses in many agricultural countries are larger than the housing room per family in the cities, shelter is no more expensive for four or five children than for two or three. Food, primarily home-produced, does not cost in direct proportion to the number of children. The older children take care of the younger ones. Clothing costs little because it consists of the "hand-me-downs" of the older children. An additional child does not necessitate any extra rent. When more room is needed, the father and his neighbor construct an additional "L" to the house, with little more expense than the cost of raw lumber. It is evident, therefore, that an additional child costs less to raise in a country family than in the city family of either the upper or the lower class. Furthermore, the child in a rural family soon begins to pay for himself by aiding in the agricultural work and increasing the family income. Moreover, in countries where peasant community landownership exists, an additional child means an additional lot of land in the periodical redistributions.

Closely related to this lower cost in rearing children and the earlier development of their income-increasing activity in rural districts is the greater expansion of desires and necessities in cities. If city families were to attempt to rear their children as simply as those in the country, they could have larger families. But the factors of city life, such as heterogeneity, mobility, contact, isolation among strangers, and so forth, seem to affect the demands of city families, especially in the upper classes, so that they refuse either to have many children or to rear them in the simple country manner. Some of these factors are inseparable from those connected with city environment, but others are new systems of attitudes inculcated in the parents themselves. One type of these attitudes of city parents is the feeling that children will hinder them in their attempts to climb the social ladder. As the greater vertical mobility of the city population promises greater opportunity for social climbing, many urban climbers limit the number of children; in many cases they have none; and in other cases they do

not marry.[51] This situation may be called "economic individualism." It results in the parents spending more energy and more income on self-promotion and less on the bearing and rearing of children.

Furthermore, the factor of density of population must be mentioned. In a series of recent studies the investigators attempted to prove that the birth rate tends to decrease with the increase in density of population. The point is not proved and it is contradicted by many opposing facts; nevertheless, there may be an element of truth in it. Since city populations have a greater density, this factor, if true, may be responsible, to some extent, for the lower birth rate of the cities.

Another significant factor is the comparative age of marriage among the country and the city population. Numerous studies have proved that marriages of young persons are relatively more fertile than those of older persons. In the chapter on the family it is clear that on the whole the rural population, women in particular, tends to marry somewhat earlier than the urban population.[52] This suggests that earlier marriage in the country may be responsible, to some extent, for the higher birth rate of the country population.

The fact that the practice of birth control and artificial limitation of offspring appeared and spread in the cities earlier because of more accessible contraceptive methods is probably responsible for the lower birth rate in the cities. All these factors explain the greater success of birth control in the city population. The greater practice of birth control explains the lower birth rate and the downward movement of the birth rate during the last few decades in all urbanized and industrialized countries.

Without prolonging this discussion we may summarize it by saying that religion, family life, economic causes, less increase of wants in the simpler environment, a lower mobility, lower density of population, earlier marriage, and less birth control are the primary factors maintaining a relatively higher birth rate in the rural districts than in the cities.

[51] For data, works cited, and critical comments on the correlation coefficients between birth rate and business cycle, see Pitirim A. Sorokin, *Contemporary Sociological Theories*, pp. 554 ff. For additional data and criticism and for the effects of the greater mobility of the city populations, see pp. 374 ff.

[52] See also Frank W. Notestein, "Differential Age at Marriage," *American Journal of Sociology*, July, 1931, pp. 22–48.

D. THE CRUDE RURAL-URBAN VITAL INDICES

We have examined all the fundamental sources that serve as barometers of the comparative health and vitality of rural-urban populations. Some of these sources, such as the medical examination of school children and recruits and the morbidity statistics, depict the qualitative side of the problem. Others, the statistics of suicide, mortality, longevity, and births in particular, give quantitative knowledge of the problem. We have seen that on the whole the testimony of all these sources agrees and indicates the greater vitality and better health of the rural population.

In concluding this part we shall give the comparative rural-urban vital indices, which, in spite of their inadequacy, at least roughly and in a concise form give approximate quantitative measures of the vitality of the rural and urban classes. These indices measure vitality through the relationship of fertility to mortality. It is evident that both fertility and mortality are important measures of the vitality of any group. A group may have a very low mortality, but when its fertility is still lower it will die out and disappear in the course of time. When a group's fertility is very high and its mortality is still higher, it also is doomed to disappear. Therefore, for any vital index both processes are important and are usually included.

Various indices of vitality are used by many students who have different tastes and points of view. For the purposes of this analysis we use as an index of vitality the formula

$$\frac{\text{100 Births}}{\text{Deaths}}$$

It merely gives the number contributed by the group to the future population of the state or of the nation. It increases when factors within the population enable this group to survive with a low annual death rate and when the population has a high birth rate. An index of vitality of 100 means that the number of births within that group in that year is equal to the number of deaths within the group. Barring migrations, the group remains stationary as long as births and deaths are equivalent. The index is less than 100 when deaths are more numerous than births; such a population would tend to disappear, because its natural production of human material is less than its consumption. When it is more

than 100, the population is increasing naturally. (No allowance is made for migrations here.) [53]

But when we start to apply this formula of the vital index to urban and rural populations we are faced with an insurmountable difficulty. The only comparable birth and death rates are the crude rates. Although we possess standardized birth and death rates for a large number of countries, the method of standardization of birth rates is such that we cannot use them in this equation.

As a result, the only recourse is to the crude birth and death rates. But at the same time we must recognize several facts clearly. First, the crude birth rate underestimates the fertility of rural classes, and vice versa. Secondly, the crude death rate overestimates the mortality of the rural population, and vice versa. Thirdly, immigration to the cities from rural parts and from for-

CRUDE VITAL INDICES OF RURAL AND URBAN POPULATIONS OF THE UNITED STATES, 1924

CLASS OF POPULATION	URBAN *	RURAL †
White	188.4	206.5
Negro	123.9	174.5
Total	182.3	202.4

* More than 10,000.
† Less than 10,000.

eign countries raises the urban vital index fictitiously. Fourthly, this triple bias works steadily in favor of the urban districts, so that in every case the crude vital indices give a fictitious index high among the industrial classes of the urban districts, and low among the agricultural classes in the rural districts. Nevertheless, we give these crude indices, because, despite their inadequacy, they are rather instructive.[54]

The United States.—Crude vital indices are given in the table above for the total registration area during the year 1924.[55]

[53] See Sorokin, *op. cit.*, pp. 140–141, for a discussion of the index of vitality. The one used is approximately as valid as the best; it is simple, easy to compute, and easy to understand. It possesses all the advantages and disadvantages of the ordinary arithmetic average—as a matter of fact, it is very similar to such an average.

[54] These vital indices are computed from the same sources as the death and birth rates previously cited. We have not repeated the references in most cases.

[55] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 213–214, for an interpretation of these and other data.

Great Britain.—The table below presents the crude vital indices of rural and urban districts in England and Wales for 1912, 1917, and 1919.[56]

RURAL AND URBAN CRUDE VITAL INDICES FOR ENGLAND AND WALES

DISTRICT	1912	1917	1919
London	178.4	127.0	139.6
County boroughs	171.1	134.2	136.8
Other urban districts	188.1	143.9	144.4
Rural districts	178.9	138.5	137.4
England and Wales	179.2	137.2	139.7

In 1912 the rural districts had slightly lower averages than England and Wales as a whole. In 1917 the crude rate was slightly higher in the rural districts, but in 1919 conditions were similar to those in 1912.

Sweden.—For this country there is data by decades from 1821. The city and country vital indices for each period are presented here.

CITY AND COUNTRY CRUDE VITAL INDICES FOR SWEDEN, 1821–1926

YEAR	CITY	COUNTRY
1821–1830	91.2	156.0
1831–1840	86.5	146.6
1841–1850	101.9	158.9
1851–1860	104.2	159.5
1861–1870	125.9	161.3
1871–1880	133.6	174.4
1881–1890	157.3	175.1
1891–1900	155.8	168.7
1901–1910	173.7	172.9
1911–1920	152.6	155.4
1921–1925	147.7	166.2
1926	129.9	149.0

This one-hundred-year analysis of vital indices furnishes a historical perspective of behavior in this field. Before the industrial revolution death rates were extremely high in cities and, as a re-

[56] See the various reports of the registrar-general for England and Wales, cited.

sult, they had a negative index even with crude rates. The only time the urban index of vitality was greater than the rural index was from 1901 to 1910, a period after considerable improvements in public health and before the spread of birth control.

Switzerland.—The same trend in the urban vital index occurred in Switzerland, as is indicated in the rates given below for the years from 1891 to 1926.[57]

RURAL AND URBAN CRUDE VITAL INDICES FOR SWITZERLAND
1891–1926

YEAR	CITY	COUNTRY
1891	141.4	136.7
1896	170.3	154.9
1901	176.5	157.6
1906	163.2	160.9
1911	153.6	153.0
1916	125.8	151.4
1921	138.8	171.1
1926	118.5	168.0

These data give the crude vital index of city populations as slightly higher than that of the rural in 1891. This difference increased up to 1901, but disappeared after that time. At present the rural population is far ahead.

France.—The table below presents some historical data concerning the crude vital indices in rural and in urban divisions according to the size of the city in the years from 1887 to 1909.

CRUDE VITAL INDICES FOR COMMUNES IN FRANCE

YEAR	LESS THAN 5,000	5,000–20,000	20,000–100,000	ABOVE 100,000
1887	110.6	105.1	92.4	106.0
1890	99.9	92.6	86.3	96.2
1895	98.1	95.4	92.7	101.6
1900	98.4	95.8	77.8	101.2
1906	108.0	100.6	94.2	99.6
1909	120.6	97.9	90.7	96.5

[57] The city rate is based upon fifteen principal cities before 1910 and eighteen since that time.

Before 1860 the rural districts apparently had higher crude indices of vitality than the urban when Paris is compared with France as a whole. Between 1860 and 1900 the differences fluctuated, but on the whole the rural districts kept the ascendancy. Since 1900 they seem to have had higher indices than the urban districts, although the last war and the postwar influx of the foreign born into France were disturbing factors.[58]

Germany.—The data below depict the situation in 1926.

CRUDE VITAL INDICES FOR GERMANY, 1926

BERLIN	CITIES OF 100,000 OR MORE	50,000–100,000	30,000–50,000	15,000–30,000	UNDER 15,000	KINGDOM
98.5	137.7	168.8	169.8	175.9	185.0	166.8

The highest crude index of vitality is found in communities under 15,000; a progressive decline accompanies increase in size, Berlin having a negative rate.

Bulgaria.—During the years from 1909 to 1912 and during 1920 and 1921, the crude vital indices for the cities were 146.6 and 160.1, respectively, and 187.5 and 193.7, respectively, for the rural districts.

Poland.—In 1926 in large cities (25,000 population) the crude vital index was 187.2; in small cities 178.2; in rural communes 220.3.

Belgium.—The table below gives the crude vital indices.

CRUDE VITAL INDICES FOR BELGIUM, 1924

LOCALITY	1924	1925
Cities 25,000 and more	121.4	117.9
25,000–5,000	162.8	159.0
5,000–2,000	177.2	173.7
2,000 and less	159.1	158.5
Kingdom as a whole	153.6	151.0

Norway.—In 1923, the urban and rural vital indices were 154.7 and 211.5, respectively.

[58] See Émile James, "L'immigration italienne dans le sud-est," *Revue des études coopératives,* VII, 1–23 (October, 1927). *"Il est humiliant," dit-on, "de voir des colons étrangers s'enrichir sur la terre qu'abandonnent nos paysans."* (See page 1.)

Denmark.—The crude vital indices are given in the table below.

CRUDE VITAL INDICES FOR DENMARK

YEAR	CAPITAL	PROVINCIAL CITIES	RURAL COMMUNES
1911–1915	163.0	164.7	232.8
1916–1920	147.9	144.0	220.0
1925	178.8	168.3	259.4

The Netherlands.—During 1925 and 1926 in cities of 20,000 to 50,000 population, the crude vital index was 268; in cities of 5,000 to 2,000 population, 259; in all cities, 247; and in rural communities of less than 5,000 population, 249.

Rumania.—The crude vital indices at five-year periods from 1900 to 1924 are set forth in the table below.

CRUDE VITAL INDICES FOR RUMANIA

YEAR	URBAN	RURAL
1900	129.6	168.0
1905	112.7	165.1
1910	125.7	164.9
1915	127.0	173.5
1920	107.6	134.1
1924	131.9	168.2

Canada.—In 1921 for the four largest cities the crude vital index was 220.9, and for Canada as a whole it was 254.7.

New South Wales.—The crude vital index for the metropolis was 257.8 in 1921, whereas it was 284.0 for the remainder of the country.

Uruguay.—In 1921 Montevideo had a crude vital index of 151.7 while in the remainder of the state it was 253.7.

Italy.—The three largest cities in 1925 had a crude vital index of 131.1 and the rural communities 161.8.

Union of South Africa.—In 1925, the European population had a crude vital index of 233.8 in the cities and 359.7 in the rural districts.

The data cover about twenty countries and are representative of five continents. In addition, some countries give data for all of the nineteenth as well as the twentieth century. There are several general conclusions. Rural people have greater vital indices than urban people, a fact that is evident notwithstanding the consistent overestimation of urban vitality in the crude rates. In some countries cities have a greater crude vitality index than rural districts because of the use of crude rates. If corrected, the vital indices would be lower even in these cities than they were in rural districts. The relative vitality of rural peoples is higher in purely rural countries than in more highly urbanized countries. Contrast the more purely rural countries of eastern Europe with England or the western portion of the United States with the eastern.

The claims of many writers at the end of the last century that cities were tending to increase their own populations by native births rather than by immigration appears unfounded.[59] There was the period from 1875 to 1910 (varying in countries with different amounts of urbanization and with different cultures) in which crude vital indices in cities approached, and sometimes even surpassed, rural crude vital indices. But that was a mere cyclical trend, due to the development of medicine and hygiene in cities and the wave of migration to the cities. It was followed by another period when city families developed more extensive use of contraceptives and when urban medical and hygienic practices spread to the rural communities. Whether birth control will spread in the future to the rural districts cannot be foretold because of the power of selection that operates to keep many phases of urban culture out of the rural districts. However, the figures show that rural and urban vital indices again grew apart, and at present the birth rates are considerably higher in the rural districts. If it were possible to give standardized, rather than crude vital indices, the present incomparably more favorable rate of the rural districts and the increase of the discrepancy between the vital indices, compared recently, would be more marked and more general.

[59] This does not mean that the cities have not gained, for they now, as a rule, replace deaths by native births. It means that rural migration is as important a factor as before in the increase of the urban population. For an elaboration of this see chapter xxii, which deals with rural-urban migration, and Sorokin and Zimmerman, *op. cit.*, chaps. xxiii-xxvi.

We need only indicate that birth rates and vital indices, like other rural-urban phenomena, vary more from city to city and from one class within the city to another, than within rural districts.

The subsequent readings give additional material and many details of the problems discussed in the preceding paragraphs, where we tried to summarize all the important data scattered throughout many publications or not given in a compact form in published works. The readings supplement these data and offer analyses of many problems only slightly touched upon in the introduction. In this way they furnish additional insight into the problems of rural and urban vitality. Since the titles are self-explanatory there is no need of any additional comment.

167. The Registrar-General for England and Wales (T. H. C. Stevenson): Mortality of Occupational Groups in England and Wales, 1921–1923*

In the following pages the mortality of the various occupations, both from all causes jointly and from those distinguished in Tables C, D, and F, will be compared from the points of view of each of the two latter tables. That is to say that the ratios of the occupational Comparative Mortality Figures to the mean for all occupied and retired civilian males will be studied in conjunction with the "positions" recorded in Table F for each occupation under each cause. In the preparation of this table, the C. M. F.'s [Comparative Mortality Figures] for each of the 178 occupational groups included in it have been arranged in order of magnitude for each cause of death dealt with, starting with the lowest. Thus, for influenza, the C. M. F., 6.2, for barristers is the lowest in the occupational list, and is given position 1, while that for grinders of cutlery, 106.7, is the highest, as expressed by position 178. It is thus possible from this table to ascertain not only the highest and lowest occupational mortalities, from the various causes, as stated in lists in previous reports, but the precise rank of every occupation under every cause dealt with, whether it is found near the top or bottom of the list or intermediately. It is only necessary to remember that rank 1 means lowest and rank 178 highest occupational mortality under each cause, in order to read the table. . . .

In the following pages the first figure quoted for an occupation after

* From *Occupational Mortality, Fertility, and Infant Mortality,* Registrar-General's Decennial Supplement, England and Wales, 1921, Part II, London, 1927, pp. liii-lv, cxv, cxxii, cxxvi, cxxix, cxxxiv.

any cause is its position for that cause in Table F, and the second the ratio of its C. M. F. for that cause to that of all occupied and retired males, taken as 1,000 (Table D). Thus, for waiters, cancer (178, 2003) means that their cancer C. M. F., 257.2, is the highest for any of the 178 occupational groups compared, and is 200.3 per cent of average; and for Anglican clergy, phthisis (6, 321) means that five occupations yield lower rates than their C. M. F. of 52.5, which is 32.1 per cent of average. Naturally, these indices point very much in the same direction, but each forms a useful supplement to the other. The same ratio, for instance, may be of much more significance for one cause than another. Occupational mortality from some causes, such as phthisis, varies much more than from others, such as cancer, and we find accordingly that the same ratio is more significant for cancer than for phthisis. Waiters (178, 2003) have twice the average mortality from cancer, and tobacco factory operatives (160, 2002) from phthisis, but for waiters this implies the highest cancer mortality of the 178 occupations, while the phthisis mortality of tobacco workers is exceeded by that of 18 other occupations.

On the other hand, as a certain number of small occupations, including 14 subdivisions of the 164 occupation groups dealt with, have been included in Tables E and F on account of some special risk involved, the occupations of highest mortality tend to be smaller (in numbers at risk) than the average. For this reason average mortality implies a position less than half way down the list, which would of course be 89 or 90 in a list of 178 occupation groups. Thus group 145, journalists, etc., whose total mortality is nearest average with a ratio of 1003 (Table D), hold position 77 in Table F, well above midway; and position 89 in this table is held by group 147, proprietors and managers of theaters, etc., whose C. M. F. ratio in Tables B and D is 1020.

Agricultural occupations as a whole return, as always, a very favorable mortality experience. For the whole order, comprising 876,400 males aged 20–65 at the 1921 census, the mortality ratio (deaths which actually occurred at these ages as a per cent of those which would have occurred if the mortality at each age had been that of all occupied and retired civilian males) was only 68; and for each agricultural occupation distinguished it was below average, the highest ratio being 87 for a comparatively small group of 2,687 estate laborers. . . . This mortality [of the agricultural occupation group] is distinctly below that of the rural districts in which agriculture is mainly carried on. The rates in 1921–1923 for agricultural laborers, whose mortality is slightly above that of agriculturists in general (69:68 . . .), compare as follows with those for the rural districts in 1921–1923 at certain ages:

DEATHS PER 100,000 LIVING

AGE GROUP	AGRICULTURAL LABORERS	RURAL DISTRICTS ALL MALES
25–35	340	385
35–45	416	517
45–55	730	848
55–65	1,727	1,905

As the population of the rural districts is largely composed of agriculturists (in 1921 the number of males aged 20–65 engaged in agriculture in England and Wales was 42 per cent of the number at the same ages enumerated in the rural districts) the contrast in mortality between agriculturists and the population amongst which they live must be considerably greater than that expressed by the above figures. The extent of this advantage at different periods of life (over the general average for all areas, urban and rural) can be seen in Table B for the five agricultural occupation groups distinguished in the abstracts. Generally speaking, it is large in early and middle life, and considerably less in old age. Farmers, especially, start working life with a very great advantage, which in their case is reduced almost regularly as age advances. In early life their mortality is much lower than that of their laborers, but from 35 on very much the same.

One of these occupations, that of farm bailiffs and foremen, is remarkable as returning the lowest mortality, as measured by the C. M. F. of the 178 occupation groups dealt with in the abstracts. This may be seen from Table E, which shows that these men come first on the list (i.e., have the lowest C. M. F.) at 20–65, second at 25–35 and 45–55, third at 55–65, fourth at 35–45, and seventh at 20–25—a remarkable record of consistently low mortality as compared with other men of the same ages. At ages over 70 however, their rate is rather high, being exceeded by those of only 34 other occupations. [The death rates recorded at this age are unreliable, however.]

The consistently low mortality of farm foremen during the working period of life is a feature common also to other groups of foremen, as follows:

The first three of these groups are the only ones out of the list of 178 described as foremen, but the fourth is evidently of the same nature. At all ages under 65 each of these groups of foremen stands high in the list of 178 occupations, the lowest position being 57th at 55–65 for the mining superintendents. So consistent a record requires explanation, and two possible reasons for it suggest themselves—(1) selection

Position (Table E)

	Ages							
	20–65	20–	25–	35–	45–	55–	65–	70–
Farm bailiffs, foremen	1	7	2	4	2	3	20	144
Woodworking foremen	5	47	9	1	12	12	54	58
Builders' foremen	15	11	17	8	27	20	37	94
Coal mines, subordinate superintending staff	27	26	48	7	24	57	119	163
Railway officials	10	..	18	8	15	22	62	42

for promotion to foreman rank partly on grounds of health, and (2) a tendency to exaggeration of industrial status in filling up the census schedules. As to (1) it seems unlikely that a man of bad health record or subnormal capacity for work would be selected for the post of foreman, but how far such conscious or unconscious application by employers of the test of physical fitness in selecting foremen suffices to account for their low mortality must remain uncertain. As to (2) there is evidence in the tables of a tendency to magnification of office in the statement of occupation on the census schedules by the persons concerned which probably does not apply in like degree when entry of their occupation in the death register has to be made by an official not subject to the same very natural tendency. If in this way the population of foremen tends to be overstated while their deaths are not, understatement of their mortality must result. It may be noted in Table A that the mortality of company secretaries and registrars, and of heads of commercial office departments, is remarkably low, much lower than for the church or any other profession, for which, generally speaking, correspondence between the entries in the census schedules and the death registers must be good, owing to the existence of an occupational definition in the form of a professional qualification. Unless physical qualifications are a very important factor in regard to promotion in commercial as well as in manual work, the second explanation seems the more applicable in this case.

It would appear, therefore, that farm bailiffs owe their proud position to the conjunction of two favoring influences—agricultural occupation and foremen status. Like the mining deputies, etc., they fall away sadly in old age, their mortality at ages over 70 being 32 per cent above average (Table B). Selection has naturally ceased at these ages, but such a reversal of experience of earlier life is not to be explained on this ground alone. The unreliable nature of the death rates at this age [see page xi of this report] has to be borne in mind.

TABLE B

MORTALITY AT VARIOUS AGES OF MALES IN CERTAIN OCCUPATIONS AS COMPARED WITH THAT OF ALL OCCUPIED AND RETIRED CIVILIANS OF SIMILAR AGE TAKEN AS 100 IN EACH CASE, 1921–1923

OCCUPATION			AGES 20–65 (C.M.F.* RATIO)	16–	20–	25–	35–	45–	55–	65–	70 AND UPWARDS
All males			101.3	117	105	105	103	101	99	96	82
Social class I	(upper and middle)	Civilians only	81.2	57	67	65	76	85	87	94	82
II	(intermediate)		94.2	83	87	94	92	94	96	99	98
III	(skilled workers)		95.1	98	99	95	92	93	98	100	97
IV	(intermediate)		100.7	100	104	105	105	101	97	94	102
V	(unskilled workers)		125.8	121	116	125	138	130	119	110	115
Farmers and their relatives			67.4	36	56	75	70	66	67	75	85
Gardeners and laborers			70.7	60	100	91	68	61	69	68	79
Farm bailiffs and foremen			52.6	87	34	38	54	49	61	80	132
Woodmen and laborers in woods and forests			71.4	77	127	80	74	75	58	66	95
Agricultural laborers (including shepherds)			68.8	69	87	85	65	63	67	73	100

* Comparative mortality figure.

TABLE D

Standardized Mortality (Comparative Mortality Figures) of Males Aged 20–65 in Certain Occupations, from All Causes and from Certain Selected Causes, Compared with That of All Occupied and Retired Civilian Males Taken as 1,000, 1921–1923

Disease	All Males	All Occupied and Retired Civilian Males	Social Class I, (Upper and Middle, Civilians Only)	Social Class II, (Intermediate, Civilians Only)	Social Class III (Skilled Workers, Civilians Only)	Social Class IV (Intermediate, Civilians Only)	Social Class V (Unskilled Workers, Civilians Only)	Farmers and Their Relatives	Gardeners and Their Laborers	Farm Bailiffs and Foremen	Woodmen and Laborers in Woods and Forests	Agricultural Laborers (Including Shepherds)
All causes	1,013	1,000	812	942	951	1,007	1,258	674	707	526	714	688
Influenza	1,003	1,000	835	937	934	1,124	1,181	734	761	657	604	871
Tuberculosis (all forms)	1,030	1,000	508	855	978	1,002	1,375	462	757	243	761	628
Respiratory tuberculosis	1,030	1,000	489	844	977	1,004	1,401	414	751	247	739	588
Syphilis, etc.	1,066	1,000	727	911	963	959	1,399	262	520	384	653	387
Cancer (all sites)	995	1,000	798	920	990	964	1,229	724	885	699	745	699
Diabetes	992	1,000	1,246	1,451	918	754	664	1,311	648	287	984	598
Cerebral hemorrhage	1,011	1,000	884	1,029	996	942	1,080	717	557	459	470	584
Diseases of the circulatory system	1,001	1,000	930	1,012	930	970	1,199	666	744	513	670	670
Diseases of the heart	998	1,000	820	998	931	990	1,213	684	788	556	726	710
Valvular disease of the heart	1,008	1,000	569	902	964	1,062	1,276	705	853	574	580	738
Other heart disease	989	1,000	1,062	1,091	899	921	1,152	663	726	538	866	683
Diseases of the respiratory system	997	1,000	634	759	918	1,109	1,559	486	488	410	325	593
Bronchitis	988	1,000	256	548	937	1,198	1,762	230	375	234	198	490
Pneumonia	1,001	1,000	828	841	895	1,071	1,502	592	528	562	320	635
Diseases of the digestive system	1,032	1,000	1,274	1,225	884	936	1,067	985	766	565	785	669
Peptic ulcer	1,044	1,000	905	968	968	1,051	1,253	880	810	715	1,146	658
Appendicitis	1,000	1,000	1,697	1,427	888	843	697	1,629	1,090	472	1,101	663
Cirrhosis of the liver	1,021	1,000	1,625	1,865	656	740	865	781	365	260	344	292
Chronic nephritis	1,017	1,000	994	1,128	968	910	1,064	722	577	484	270	600
Suicide	1,021	1,000	1,156	1,276	905	889	975	1,235	971	1,198	988	1,000
Accident	1,020	1,000	809	700	949	1,294	1,201	751	434	753	1,594	921

Table D shows the mortality of farmers to be below the average from every cause distinguished in that table (and these in combination represent 86 per cent of their total mortality) except diabetes, appendicitis, and suicide. The excess of 31 per cent from diabetes may be associated with free consumption of an abundant food supply (see page xxxi). It resembles the only other disease, mortality from which specially affects farmers—appendicitis—in its record of special fatality to the more comfortable classes. These facts suggest that farmers, whose C. M. F. ratio from digestive diseases generally, 98.5 per cent, is out of proportion to their ratio of 67.4 per cent from all causes jointly, may suffer from the effects of good living, even though this is not recognized as a cause of appendicitis. Excess of suicide amongst farmers is common also to their bailiffs, and may find its explanation in the peculiar anxieties and risks of a calling so much at the mercy of the weather.

Gardeners return a very consistent record of low mortality, the only cause in excess being, again, appendicitis. Consistently low mortality from all the causes distinguished in Table D is, indeed, a characteristic of all the agricultural occupations. It reaches its maximum, for that table, with agricultural laborers (including shepherds), whose standardized mortality is above average from no cause, though it just reaches average in the case of suicide. No other occupation except carpenters can claim this distinction.*

TABLE E

MORTALITY RANK OF OCCUPATIONS AT VARIOUS AGES OF MALES, 1921–1923: POSITION OF EACH OCCUPATION IN A LIST ARRANGED FOR EACH AGE IN ORDER OF MORTALITY, FROM 1, THE LOWEST, TO 178, THE HIGHEST

OCCUPATION	AGES 20–65	20–	25–	35–	45–	55–	65–	70 AND UPWARDS
Farmers and their relatives..	9	15	24	19	13	6	11	35
Gardeners and their laborers	12	87	69	17	6	9	4	22
Farm bailiffs and foremen...	1	7	2	4	2	3	20	144
Woodmen and laborers in woods and forests.....	13	130	31	23	19	1	3	60
Agricultural laborers (including shepherds)	11	50	44	14	9	7	8	72

Note.—The positions for age group 16–20 have been omitted because of the low mortality, and those for ages over 70 are of doubtful significance because of variation in age constitution within the Group (see page xi).

* EDITORS' NOTE.—Subsequent tables give all the important data concerning the mortality of the agricultural occupational groups as compared with that of all occupational groups as well as of the five fundamental social classes.

TABLE F

MORTALITY RANK OF MALES AGED 20–65 YEARS FROM CERTAIN SELECTED CAUSES, 1921–1923: POSITION OF EACH OCCUPATION IN A LIST ARRANGED FOR EACH CAUSE IN ORDER OF STANDARDIZED MORTALITY FROM 1, THE LOWEST, TO 178, THE HIGHEST

OCCUPATION	ALL CAUSES	INFLUENZA	TUBERCULOSIS (ALL FORMS)	RESPIRATORY TUBERCULOSIS	SYPHILIS, ETC.	CANCER, (ALL SITES)	CANCER OF THE STOMACH	DIABETES	CEREBRAL HEMORRHAGE, ETC.	DISEASES OF THE CIRCULATORY SYSTEM	DISEASES OF THE HEART	VALVULAR DISEASE OF HEART	OTHER HEART DISEASE	DISEASES OF THE RESPIRATORY SYSTEM	BRONCHITIS	PNEUMONIA	DISEASES OF THE DIGESTIVE SYSTEM	PEPTIC ULCER	APPENDICITIS	CIRRHOSIS OF LIVER	CHRONIC NEPHRITIS	SUICIDE	ACCIDENT
Farmers and their relatives	9	39	11	8	14	17	70	133	34	9	13	23	14	12	10	18	90	67	148	90	36	129	92
Gardeners and their laborers	12	42	37	40	33	53	51	41	12	17	26	49	22	13	24	10	31	50	99	33	13	85	40
Farm bailiffs and foremen	1	29	3	2	22	11	40	10	6	4	5	11	6	5	12	17	8	30	31	22	8	122	93
Woodmen and laborers in woods and forests..	13	21	39	36	45	20	106	94	7	11	18	13	50	2	7	2	36	112	103	31	1	89	163
Agricultural laborers (including shepherds) ..	11	70	21	19	23	11	57	31	17	10	15	27	16	18	33	23	15	26	42	25	15	92	111

TABLE H

MORTALITY OF LEGITIMATE INFANTS CLASSIFIED BY FATHER'S OCCUPATION, 1921
[The rate of infant mortality per 1,000 births in each occupation]

OCCUPATION	DEATHS AND TOTAL INFANT MORTALITY			AGES AT DEATH (Both Sexes)			
	Males	Females	Both sexes	Under 4 weeks	4 weeks–3 months	3–6 months	6–12 months
Total legitimate infants	89	69	79	33.9	14.0	13.2	18.0
Social class I (upper and middle)	45	32	38	23.4	4.9	4.3	5.8
Social class II (intermediate)	63	48	55	28.3	9.5	8.1	9.6
Social class III (skilled workers)	87	66	77	33.7	13.5	12.4	17.2
Social class IV (intermediate)	99	79	89	36.7	15.8	15.6	21.3
Social class V (unskilled workers)	109	85	97	36.9	17.8	17.7	24.6
Farmers and their relatives	59	43	51	29.7	8.7	6.3	6.5
Gardeners	59	48	53	28.8	8.4	6.8	9.3
Agricultural laborers	76	58	68	34.2	12.3	9.4	11.7

168. J. H. Kohlbrugge: The City and the Country as Biological Worlds *

I

[It is the purpose of this paper to show the influence of the cities upon the inhabitants of the entire country. This study will be concerned largely with the cities of the Netherlands in earlier centuries. Historical comparisons would have prevented the formation of much rash judgment regarding the unfavorable effects of city life. Despite the unreliability of the figures of earlier centuries, it is possible to get death rates for some cities, especially Amsterdam, in which the first census in Europe was taken in 1622. The contrast between earlier and contemporary times may be shown in the following computation. Amsterdam has at present 560,000 inhabitants, of whom 15 per 1,000 die annually, making a total of 8,400. If the death rate of the eighteenth century were still prevalent there would be 22,700 deaths, an annual loss of 13,000.]

The influence of urban life may be shown better by comparing the death rate with the birth rate; this has an advantage because for such a computation the population of earlier centuries, which is generally not known, is not needed. Unfortunately, the birth rate of Amsterdam is also unknown. Struyck has determined the total number of births for only two years of the eighteenth century, 1739 and 1740; the average number was 7,503. If that is correct, there were 110 deaths per 100 births, whereas Kersseboom was willing to accept only 102. These approximations are not improbable, as is shown by the accompanying table. The first part presents a compilation of rates of smaller cities of the Netherlands, the second of the larger cities of Europe, both showing how many deaths occurred per 100 births.

I may add that the statistics for the Netherlands for the years from 1803 to 1813 show that in all Dutch and Belgian cities taken together there were 101.8 deaths per 100 births. Bickes shows similar or even more unfavorable relationships during the first years of the nineteenth century for the remainder of Europe.

The tables below show that in the eighteenth century the mortality rate was greater than the birth rate in the cities, including the lesser ones, so that the cities could not maintain themselves by their own power. In the most favorable case, when the ratio of births to deaths was about 100:100, they could maintain the population they had once reached, but in most cases they would have died off slowly without

* From J. H. Kohlbrugge, "Stadt und Land als biologische Umwelt," *Archiv für Rassen- und Gesellschafts-Biologie,* VI, 493–511, 631–648 (1909). Translated and printed with the permission of the editors of the *Archiv* and its publisher, J. F. Lehmanns Verlag. The fragments within brackets are abstracts.

the migration from the country. However, most of the cities named here increased during the eighteenth century, so that migration furnished not only the increase, but also covered the deficit that occurred annually because of the greater mortality. If I say that cities that had reached an equilibrium of birth and death rates were able to maintain the existing population, I am not entirely correct, for the existing population did not arise spontaneously. And since the ratios during the seventeenth and sixteenth centuries (see above, Leipzig, Augsburg, and Amsterdam) certainly were no better than during the eighteenth century, the cities must have been draining the country of men for centuries. These men have partly fallen victim to the life of the city,

DEATH RATES IN VARIOUS CITIES

PERIOD	CITY	PER 100 BIRTHS	AUTHORITY
1760			
1760–1780	Enkhuizen	135	G. N. H.*
1742–1771	*Alkmaar*	130	Paludanus
1728–1737	Enkhuizen	180	Struyck
1780–1785	*Brielle*	148	G. N. H.
1700–1739	Brielle	132	Kersseboom
1766–1787	*Haarlem*	126	Nederl. Jaarb.
1700–1814	Middleburg	112	Opgave
1700–1739	Dordrecht	111	Kersseboom
1696–1739	Gouda	108	Kersseboom
1690–1737	Haarlem	109	Kersseboom
1690–1739	Delft	107	Kersseboom
1701–1732	Gouda	105	Struyck
1747–1766	Brielle	112	Van Barkhey (Kluit)
1690–1739	*Leyden*	104	Kersseboom
1700–1739	Schiedam	103	Kersseboom
1774–1781	*Harlingen*	93	Camper
1700–1814	Leeuwarden	79	Opgave
1738–1814	Arnhem	76	Opgave
1700–1814	Zwolle	73	Opgave
1700–1814	Maastrich	73	Opgave
Eighteenth century	Franeker	100	Camper

* It is to be noted that none of the figures I have cited above are to be found in the sources; but they have been computed from figures given there.

G. N. H. signifies *Genees-, Natuur- en Huishoudkundige Jaarboeken,* which carried annual lists of births, deaths, and marriages, both domestic and foreign, from 1776–1785. The figures for Enkhuizen are found in Volume IV, Part 2, 1782; those for Brielle in the various yearbooks.

DEATH RATES IN VARIOUS CITIES—*Continued*

PERIOD	CITY	PER 100 BIRTHS	AUTHORITY
1601–1780	London	143	Bickes
1752–1760	Frankfort on the Main	150	Bickes
1656–1813	Breslau	128	Bickes
1601–1800	Danzig	126	Bickes
1709–1743	Rome	125	Bickes
1720–1775	Vienna	124	Bickes
1617–1774	Leipzig	123	Bickes
1767–1774	Stockholm	120	Bickes
1501–1749	Augsburg	115	Bickes
1758–1760	Munich	115	Bickes
1726–1749	Königsberg	110	Bickes
1712–1775	Copenhagen	110	Bickes
1712–1774	Berlin	108	Bickes
1617–1752	Dresden	108	Bickes
1754–1773	Strasbourg	106	Bickes
1768–1775	Hamburg	105	Bickes
1755–1773	*The Hague*	103	Verz. N. L.
1776–1786	*Rotterdam*	100	Nederl. Jaarb.
1710–1813	Paris	99.9	Bickes
1700–1814	Bruges	93	Opgave
1700–1814	Ghent	89	Opgave
1725–1735	Paris	84	

Nederl. Jaarb. signifies *Nederlandsche Jaarboeken,* which also carried annual statistical information.

Paludanus, R., *Verhandeling over het getal der inwoonderen enz. binnen Alkmaar in Hollandsche Maatsch v. Wetenschappen,* Haarlem, 1773, D. XIV.

Kersseboom, W., *Proeven von politique rekenkunde vervat in drie verhandelingen,* The Hague, 1748.

Struyck, *Nadere Ontdekkingen,* 1753.

Bickes, *Die Bewegung der Bevölkerung mehrerer europäischer Staaten,* Stuttgart, 1883.

Barkhey, F. van, *Natuurlyke historie van Holland,* III, 1600.

Opgave der bevolking voor het koningryk der Nederlanden 1815–1824, The Hague, 1827. *Mouvement de la population dans le royaume des Pays-Bas.*

Verz, N. L., *Verzamelingen van nauwkeurige lysten opgemaakt uit de oorspronkelyke registers betreffende sterfte, geboorte en huwelyken in's Gravenhage 1755–1773,* The Hague, 1774.

Camper, P., *Aanmerkingen over het schynbaar groot getal gestorvenen binnen Haarlingen Alg. Vaderl. letteroefeningen,* 1782, IV, 222.

For the cities in italics the number of stillbirths was used in addition to baptisms; for the others only the number of baptisms is known. This is true for the cities of the Netherlands; I do not know whether it applies to the other cities, the figures for which I take from Bickes. Since the ratio of stillbirths was approximately 40: 1,000, the ratios in the tables would have to be reduced by 4 per cent for the cities whose names are not given in italics. This however would not yield any appreciable difference.

partly increased the number of residents, and so made possible the constant increase. The cities resembled giant parasites that lived at the cost of the rural population. To what extent they did this is best shown for London (according to Morris). There, during the years from 1601 to 1757:

2,778,724	Persons were buried
1,905,260	Persons were baptized
873,464	Loss
188,571	Additional deaths due to the plague
1,062,035	Total loss

Accordingly, the loss was 1,000,000, or 500,000 for the much shorter time between 1688 and 1750, according to Morris. "What a monstrous loss hath this been to the nation," was his comment, and he called the cities a creeping plague. Süssmilch [1] also compared the cities with the plague, when he concluded from his computations that a country with 6,000,000 inhabitants annually lost 1,000 persons through the cities; consequently, in the course of twenty-five years it would lose 25,000, or as many as had been claimed by the most serious epidemic of the plague.

It may be well to note also, with regard to London, that it had not yet reached 500,000 inhabitants during this time, and that the entire country had not reached 6,000,000 (according to Kersseboom, it had about 4,600,00 in 1600, and 5,500,000 in 1700). Thus the 500,000 inhabitants of London did not contribute to the increase of the population in general; that was left to the other 5,500,000 inhabitants. These latter had an excess of births amounting to 5 per 1,000, a total of 27,500 annually (computed according to Short). Of these, again, 8,000 died in London, so that the general population was able to increase by only 19,500. That explains the earlier slow increase of the population, which becomes much clearer when we consider how many died in the internal and foreign wars, and hence are not to be found on the burial lists. Incidentally, no computations for the entire country can be made, for all information concerning Dissenters and Catholics is lacking in England.*

[1] Johann P. Süssmilch, *Die göttliche Ordnung in den Veränderungen des menchlichen Geschlechts,* 5th ed., Berlin, 1780.

* Editors' Note.—See also chapter ii of this work, where other data of a similar character are given from the computations of the Political Arithmeticians of the seventeenth and eighteenth centuries.

All English statisticians of the eighteenth century complained of the bad influence of the cities on the population. Kersseboom did the same for the Netherlands, and the French sociologists, like Rousseau and Quesnay, united their voices in this chorus. Only Buffon did not join. He was deceived by the favorable circumstances of Paris, which were only apparently favorable, as the Parisian infants were taken to the country to die; this fact escaped his otherwise noteworthy acuity. Bickes treats this question in great detail, but asserts a change for the better after 1815.

Let us consider this change for the better in more detail. On this point we have more accurate figures at our disposal, because the statistical records of Amsterdam, since 1830, generally correspond to modern statistical standards. Death rates at first exceeded birth rates; from 1830 to 1849 they were equal; until 1850 the increase of the city was therefore due to migration from without (Thyssen). Nevertheless, the city increased regularly after the decline about 1800.

1795.....	217,000	1829.....	202,000
1815.....	180,000	1839.....	211,000
1825.....	191,000	1849.....	224,000

Only since 1850 has the rate been improved. The table below shows the number of deaths per 100 births.

NUMBER OF DEATHS PER 100 BIRTHS IN AMSTERDAM

1830–1849..100	1855.....124	1860..... 90	1866–1875.. 80
1850..... 85	1856..... 80	1861..... 75	1876–1885.. 70
1851..... 77	1857..... 94	1862..... 77	1886–1895.. 60
1852..... 75	1858.....113	1863..... 69	1896–1905.. 54
1853..... 86	1859..... 94	1864..... 78	1906–1907.. 52.5
1854..... 81		1865..... 75	

I have given the figures for the period from 1850 to 1868 year by year, because they still fluctuate considerably and show clearly the influence of epidemics. This little table shows an improvement of 50 per cent in a little more than 50 years.* Now there are nearly twice as many births as deaths. It is to be noticed also that the birth rate has declined considerably. The table below shows the rate per 1,000 inhabitants of Amsterdam.

* EDITORS' NOTE.—Such a conclusion without standardization in age composition of the population is misleading, as is shown in the preceding introductory analysis and interpretation of the crude rates.

Birth Rate of Amsterdam per 1,000 Inhabitants

Date	Birth Rate	Population of Amsterdam	
1830–1840	37.0	1859	263,000
1840–1850	37.0	1869	265,000
1866–1875	33.0	1879	316,000
1876–1885	35.7	1889	408,000
1886–1895	37.0	1899	523,000
1896–1905	28.5	1907	565,654
1906–1907	25.5		

If the birth rate today were as great as in the first half of the nineteenth century, a population of 560,000 ± would have 20,720 births instead of 14,500. There has thus been a loss of 6,220, which is small in comparison with the above-mentioned gain of 14,000 due to the lowered death rate.

We have observed with certainty above that Amsterdam was not less healthy than the other cities of Europe during the eighteenth century. But the situation was changed slightly in the first part of the nineteenth, when Amsterdam was exceeded by some other cities.

Bickes gave the death rates in the European cities before and after 1815. Before 1815 the death rate was everywhere greater than or equal to the birth rate, but a change for the better occurred between 1815 and 1830. Of the many cities named by him, only St. Petersburg, Rome, Copenhagen, Stockholm, Danzig, Augsburg, Frankfort,[2] and Breslau maintained a death rate greater than, or equal to, the birth rate. The others have improved, as is shown by the table below.

Ratio of Number of Deaths to 100 Live Births

Hamburg	97	Strasbourg	92.7	Berlin	86.0
Munich	93	Rotterdam	89.0	Königsberg	83.8
Vienna	93	Leipzig	89.0	London	82.0
Dresden	90	Paris	88.0		

Bickes cited a similar improvement for Amsterdam, but he was mistaken in that; I have not investigated whether or not errors have occurred in other cities. However, we may well assume that his figures for the German cities are correct; the others may be disregarded. Paris

[2] I noticed that Frankfort had just as unfavorable a ratio as Amsterdam, for Frankfort has reached a birth rate that exceeded the death rate only since 1840. Without intending it as an explanation, I might mention that both old commercial cities have a large Jewish population. Otherwise I can name no identical circumstance. Stockholm was even slower in its progress, reaching that stage only after 1860.

is a city that really ought to be excluded from all comparisons, since it has long been, and still is, the custom there to send children to the country, which makes the reported death rates in the city much too low. At present we know that most cities of northern Europe are just as healthy as Amsterdam, which undoubtedly is one of the most favorable among them.

[It is probably safe to assume that after the great migrations all countries had a regular and rapid increase in population, in so far as wars did not consume the human material. But the increase ceased where the population was crowded into a small area as in the cities, for the danger of contagion was extraordinarily large, not only from such well-known destroyers of the population as the plague, smallpox, and cholera, but also from all other diseases, such as dysentery, typhoid fever, measles, scarlet fever, and, in some countries, malaria. Because of the causes named—wars, epidemics, and formation of cities—the increase of the population must formerly have been a very small one. One additional factor entering into the situation was the great infant mortality.]

It is really remarkable that the so-called natural man knows so little about the care of his newly born infants. Our earlier peasants probably knew as little about this as do the Javanese today. These latter double their number every thirty-five years, since the wars have ceased and the epidemics have been considerably checked; nevertheless, even in the regions where smallpox is not known, nearly a third of the children die before the fourth year of their lives.[3] Probably conditions were worse in Europe in the eighteenth century, for smallpox wrought havoc among the children there. Within twenty-four years (1778–1801) 17,574 children died of smallpox in Amsterdam. Infant mortality rates were high in the country as well as in the city.

232,087 children were born in Amsterdam during the years from 1820 to 1849. Of these:

11,768	were stillborn
23,889	died within the first three months
49,135	died within the next nine months
22,089	died in the 2nd and 3d year
106,881	Total

We see that nearly half of the children died before they had reached the fourth year of life. We will also present material concerning the ratio of deaths during the first year to the total number of deaths, because we can secure comparable figures on this point. We find that the

[3] J. H. Kohlbrugge, "Die Krankheiten eines Bergvolkes der Insel Java," *Janus, Archives internationales,* Amsterdam, 1897.

ratio was relatively more favorable for the first year of life during the eighteenth than during the first half of the nineteenth century. For the former I have been able to secure the following figures:

INFANT MORTALITY PER 1,000 LIVE BIRTHS IN VARIOUS CITIES IN THE EIGHTEENTH CENTURY

CITY	DEATHS	AUTHORITY	DATE
Amsterdam	210	G. N. H.	1777–1785
Rotterdam	217	G. N. H.	1777–1785
The Hague	240	G. N. H.	1755–1773
Haarlem	250	G. N. H.	1777–1785
Paris	250	Buffon	18th century
Berlin	254	Süssmilch	1752–1755
Leipzig	252	Süssmilch	1749–1756
Paris	269	Süssmilch	18th century
Brunswick	272	Süssmilch	1740–1746
Berlin	275	Süssmilch	(24 years)
Vienna	366	Süssmilch	1728–1753
Breslau	379	Süssmilch	1722–1724
Vienna	410	G. N. H.	1777–1785

The Dutch cities appear in a more favorable position; the figures were slightly below the figures for the rural parts of Brandenburg, where the ratio was 200:1,000 (Süssmilch). We find much more unfavorable figures during the first half of the nineteenth century. We can compute the ratio for Amsterdam during the period from 1820 to 1850 very exactly. It was 364:1,000. Unfortunately, I have been unable to secure comparable figures for other cities, since the statistics on this point are not available to me, except with great difficulty. But I did find that, as late as 1875–1880, 304 deaths per 1,000 in Berlin occurred during the first year of life. We will not err much if we ascribe the difference between the eighteenth and nineteenth centuries partly to the different number of births; in the nineteenth century the number increased very much, and hence the number of deaths during the first year increased also. Today the ratio for Amsterdam is 125:1,000, whereas it still is 193:1,000 for Germany as a whole (1902–1903),[4] probably because of the greater number of births. Hardly any of the large cities have as favorable a ratio as Amsterdam. The number of stillbirths also was much smaller during the eighteenth than during the first half of the nineteenth century. The table below shows the number during the eighteenth century.

[4] Würzburg citing Ziegenipeck, "Säuglingssterblichkeit," *International Kongress für Hygiene*, Berlin, 1907, Vol. XIV.

NUMBER OF STILLBIRTHS PER 1,000 LIVE BIRTHS IN VARIOUS COUNTRIES IN THE EIGHTEENTH CENTURY

LOCALITY	STILLBIRTHS	AUTHORITY
Württemberg	36	Süssmilch
Brunswick	37	Süssmilch
Amsterdam	37	G. N. H.
Haarlem	40	G. N. H.
Vienna	40	G. N. H.
Leyden	47	Struyck
Breslau	55	Struyck
Dresden	55	Süssmilch
London	50	Graunt
The village Wassenda, Sweden	51	Süssmilch
The village Broek, Holland	40	Struyck
The town Alkmaar	50	Paludanus
Bremen and Verden	50	Bickes
Schleswig-Holstein	46	Bickes
Geneva	67	Süssmilch

This short table shows that (1) Amsterdam had a favorable ratio during the eighteenth century; (2) stillbirths in the country occurred with as great frequency as in the city; (3) countries as a whole had rates of 40–50 per 1,000. During the nineteenth century the number of stillbirths in Amsterdam rose sharply at first, and sank again later.

NUMBER OF STILLBIRTHS PER 1,000 LIVE BIRTHS IN AMSTERDAM IN THE NINETEENTH CENTURY

DATE	STILLBIRTHS	DATE	STILLBIRTHS
1840–1850	66	1880–1890	57
1850–1860	66	1890–1900	53
1860–1870	62	1900–1907	43
1870–1880	59		

The rate has not yet reached the favorable level of the eighteenth century.[5]

I have already mentioned that the number of births increased in the nineteenth century. True, that can be shown for Amsterdam only by noting that in 1795 there were 3.9 persons per household and 4.4 in

[5] It is also possible that the increased number of stillbirths in the nineteenth century is due not only to the greater birth rate, but perhaps also to the circumstance that stillborn children were more frequently buried in the cemeteries, whereas during the eighteenth century they were frequently simply interred in the garden and thus were not registered.

1829. For other places it can be shown better, not by computing the ratio of births to population, a procedure that would yield only doubtful figures in view of the constantly changing population figures, but by determining how many births occurred per marriage.

NUMBER OF BIRTHS PER MARRIAGE IN VARIOUS CITIES

CITY	DATE	BIRTHS	AUTHORITY
Haarlem	1690–1737	3.3	Kersseboom
Dordrecht	1700–1739	3.2	Kersseboom
Delft	1690–1739	3.1	
Leyden	1690–1739	3.3	
Goulda	1696–1739	3.2	
Schiedam	1700–1739	4.2	
Brielle	1700–1739	3.0	
Quadyk	1720–1738	3.1	Struyck
Alkmaar	1742–1771	3.0	Paludanus
The Hague	1755–1773	3.5*	

CITY	DATE	BIRTHS	CITY	DATE	BIRTHS
Berlin	1712–1755	3.8	Danzig	1711–1730	3.8
Zurich	1700–1749	3.4	Leipzig	1681–1740	3.1
Königsberg	1723–1740	3.7	Augsburg	1666–1750	3.4

* N. L. Verz, *Verzamelingen van nauukeurige lysten opgemaakt uit de oorspronkelyke registers betreffende sterfte, geboorte, huelyken, in's Gravenhage van 1755–1773*, The Hague, 1774.

We see that the German cities had only slightly less favorable numbers than the middle-sized and small towns in Holland; if we take the average for the entire country, Germany would appear more favorable, because it had nearly 4 births per marriage during the first half of the eighteenth century, whereas Holland did not reach this number, but had only about 3.4 or 3.6, according to Struyck. It is certainly worthy of note that the parts of Germany that border on Holland had just as small a birth rate as Holland itself. (Süssmilch.) The same depression, therefore, existed in the entire west and less in the east. The number of births per marriage for London, Paris, and England, which Morris gives as 4 in each case, seems to me to be based on estimates rather than actual computations, because of the uniformity of the figures.[6]

I have computed the number of children per marriage for a number

[6] I was able to compute from the figures of Buffon that the small cities and villages of France had 5.6 children per marriage. This figure is so much higher than that for the remainder of Europe that I doubt its correctness. On the other hand, we must note that France was the most populous country in Europe during the sixteenth, seventeenth, and eighteenth centuries, possibly because of the great fertility. The decrease in fertility

of Dutch and German cities during the second half of the eighteenth century, and found a decided increase. There were between 3.7 and 4.0 births for every marriage. The fertility of marriages increased still more between 1803 and 1815, for I found 4.4 children per marriage in all cities of Holland and Belgium, then united. The increase is clearly shown by the following figures for Prussia as a whole, which I take from Süssmilch.

Fertility of Marriage in Prussia in the Eighteenth Century

Date	Number of Births
1698–1701	3.6
1717–1728	4.0
1751–1756	4.2

The table below for the Netherlands shows the increase with equal clearness:

Number of Births per Marriage in the Netherlands

Date	Births	Authority
Eighteenth century	3.25	Kersseboom
Eighteenth century	3.4–3.6	Struyck
1804–1813	4.0	Opgave
1810–1824	4.5	Opgave

The figures for the country and the villages were generally somewhat more favorable than those for the cities; these latter were generally under 4 during the eighteenth century, whereas the villages reached 4. Occasionally, however, this difference vanished, as in Holland and Belgium in 1803–1813, when the cities showed a slightly greater fertility. The differences between city and country, which are given by Süssmilch and others, are generally artificial, because the tables of unfavorable data for earlier times are included in the computations for the cities, whereas these are nonexistent for the villages. The difference between country and city is to be sought in death rates rather than in birth rates (see below), even though big cities today occasion-

in that country during the nineteenth century seems surprising. Buffon's figures, covering many villages, are also vindicated by the high fertility of the Refugees [Huguenot emigrants], which strikes one immediately when one studies the genealogies of such families.

ally show a very low birth rate. But those are conditions of a special nature that we cannot discuss further here.

The increase of births, which began at the end of the eighteenth century, continued in the Netherlands until about 1879,[7] rose to 5 children per marriage, and then gradually declined again. In Amsterdam, however, the decline began earlier and reached the lowest stage for the country as a whole. One speaks frequently of the fertility of marriages in former times; this is justified only if one has reference to the immediate past, the first half of the nineteenth century, for if one goes back further, one finds that the birth rate in the seventeenth and eighteenth centuries certainly was no higher than that today. I would also point out, contrary to the belief sometimes expressed, that death does not influence new life favorably, that births do not increase when the mortality rate is high. We observe that during the eighteenth century the mortality rate was high and the birth rate low; then the birth rate rose and the death rate declined; finally both death rate and birth rate fell. The birth rate has today again fallen to the level at which it was in the second half of the eighteenth century, for in Germany and Holland there are today 4.1 children per marriage (*Almanach de Gotha,* 1908). The number is somewhat higher in Germany (4.17) because marriages are more infrequent there. In England and Belgium the decrease is more pronounced; they have only 3.3 children per marriage, corresponding to the poorest times in Holland during the first half of the eighteenth century. But what is true today for the country as a whole in England and Belgium was true then only for the cities. I am convinced that Germany and Holland will soon show just as unfavorable rates, and I suspect that one would find a regular cyclical movement in the birth and death rates, due rather to psychological than to physiological causes.[8]

II

[An examination of genealogies shows that 248 families among the group of big business men of Hamburg and Amsterdam had existed in these cities between two and three centuries. It might be objected that, on the other hand, we have the fact that of 201 families living in Amsterdam about 1600 A.D. 142 had died out by 1900; but it must be pointed out that some of them still continue their existence in branch lines, and that families in the country die out also. According

[7] Saltet and Falkenburg, *Kindersterfte in Niederland,* Bureau van Statistik, Amsterdam, 1907.

[8] F. von Oefele, "Antikonzeptionelle Arzneistoffe," *Die Heilkunde,* Vienna, 1898. One sees in this very interesting contribution to the question of Malthusianism in ancient and modern times how widespread the knowledge of these methods was in olden times; they were forgotten during the nineteenth century and later other methods took their place.

to Baron von Dungern there were approximately 20,000 German families of the lower nobility possessing large estates about 1200 A.D. According to Kekulé von Stradonitz, 1,400, at most, are still in existence; 18,600 have disappeared. On the other hand, among the lower classes in the city of Amsterdam it was possible to secure the names of 166 families of Portuguese Jews who had settled there at the end of the sixteenth century. Of these names 84 were still to be found on the record of the synagogue 250 to 300 years later. It is, of course, not known how many of the remaining 82 families moved away from the city, left the synagogue, or died out. Similar results have been secured for Leyden, and might be secured for Berlin and Potsdam. These and various other data show that adaptation to the city—by a part of the population—is possible.]

It has indeed been pointed out that the number of city dwellers born in the city in which they reside is small and constantly decreasing, and

DIFFERENCE IN THE DEATH RATE PER 1,000 IN CITY AND COUNTRY

In large cities the deaths amount to	52–45–43: 1,000
In medium-sized cities they amount to	41–36: 1,000
In the country they amount to	25–20: 1,000*

* Süssmilch, Short, and others give similar comparisons.

hence it cannot be assumed that the families are preserving themselves in the city. But I ascribe the small number of those born in the cities of their residence to free migration, rather than to the dying out of the native population. How few of the upper classes today die where they were born! We are not able to determine what proportion of the residents was born in the city in earlier times. But migration was always a considerable factor; as early as 1849, 28 per cent of the population of Amsterdam was composed of migrants. [Of the population of every city a part is composed of those who have been urbanites for over a generation. This part, living in the city of birth, is adapted to the city and contributes little to the high mortality. The situation of the migrants in the city population is different.] If thousands enter the city and other thousands leave the city annually, both groups are formed in large part out of the same mobile persons. Not having the biological stability of the nonmigrants these increase the mortality rate of the cities; only through these mobile elements could a mortality rate higher than or equal to the birth rate result.* [The differences between death rates in city and country are shown in the table above, which Camper computed according to the figures of Price (*Philosophical Transactions,* Vol. LXV, Section XLIII).]

* EDITORS' NOTE.—This hypothesis of the author is speculative and can scarcely be proved.

The table below compiled by Ballod [9] gives the mean expectation of life at various ages in the city and in the country in Prussia in 1907.

MEAN EXPECTATION OF LIFE IN PRUSSIA, 1907

AGE	MALES		FEMALES	
	City	Country	City	Country
0	38.71	42.75	43.65	45.20
5	51.14	54.74	55.45	55.53
10	47.61	51.24	52.09	52.09
20	39.12	42.97	43.69	43.85
25	35.24	39.12	39.71	39.88
30	31.34	35.14	35.86	36.04
40	24.14	27.24	28.37	28.52
50	17.86	19.94	20.94	20.83
60	12.32	13.40	14.09	13.71
70	7.89	8.08	8.52	8.19

We may therefore assume that the cities are not harmful to females, but that among males the expectation of life in the country is four years more than in the city.[10] If one considers that the mortality of the first years of life can undoubtedly be decreased (as shown in Amsterdam, whose favorable ratio of 125:1,000 has been attained by few cities), and that the higher mortality at the best ages is not to be ascribed to the life in the cities, but rather to the factories that are concentrated there, and similar factors,* one has almost no reason to assert that the country possesses any great advantages in regard to the duration of life. . . .

A true comparison of the birth rates of country and city can be secured only by comparing the fertility of a number of families from country and city. This was the method adopted by the Niederlandisches Statistisches Bureau; let us examine its results. Seven hundred and eighty-three couples married from 16 to 20 years were selected from the city of Dordrecht, which had a population of 38,000; similarly, 3,972 families were selected from the 318,000 inhabitants of Rot-

[9] Carl Ballod, "Sterblichkeit und Lebensdauer in Preussen," *Zeitschrift des preussischen statistischen Landesamtes,* 1908.

[10] It is true that cities of other countries yield more unfavorable figures, but it seems to me one should pay attention only to those that observe modern hygienic requirements. Only when that has been done sufficiently will it be possible to compute how much more unfavorable city life is than country life. If, in the country, the well is dug near the privy, many persons die, but that is not due to the life in the country, rather to the ignorance of humans.

* EDITORS' NOTE.—But if the industrial and similar urban conditions are taken from the city, there will be no city.

terdam. These 4,758 urban families were compared with 4,685 rural families. The table below gives the results. It divides the families into classes of wealth, beginning with I as the poorest class, ending with IV as the wealthiest.

Number of Births per 100 Families, Inclusive of Stillbirths

Group	I	II	III	IV
City *	561	521	435	418
Country	519	509	475	450

* Copenhagen and Paris yielded the same relative results. Lucien March, "De la statistique des familles," *International Kongress für Hygiene,* Berlin, 1907.

Stillbirths per 100 Births

Group	I	II	III	IV
City	3.03	3.41	3.60	2.72
Country	3.36	3.70	3.98	2.00

These two tables show: (1) The birth rate decreases as wealth increases. (2) The poorer families in the cities have more children than the poorer families in the country. On the other hand, wealthier families in the country have more children. Since poor families exceed wealthy families in number, more children are born in the city than in the country. In this case 100 urban families had 530 children, and 100 rural families 507 children. (3) The number of stillbirths is greater in the country.*

When we consider mortality, the favorable percentages of births in the city are reversed.

Number of Children per 100 Families Surviving to the Fifth Year of Life

Group	I	II	III	IV
City †	400	380	327	350
Country	413	410	393	382

† Lucien March, *op. cit.*

All groups show more children surviving in the country. . . . Combining all groups, 100 urban families had 386 children who reached the fifth year of life, 100 rural families, 408. For 10,000 marriages this difference would amount to 22,000 in favor of the country in about

* Editors' Note.—These data cannot be taken as typical.

twenty years. And that would be due not to the greater fertility of the rural families, but to the greater mortality of the urban families. [All these differences cannot be explained by the ages at which marriages are contracted, for the difference in the case of males is favorable to the city, where they marry at somewhat earlier ages.

Comparisons of the economic classes in the cities show small differences. When it is remembered that the wealthier classes are as a rule those who have lived in the city longest, and that the poorer include a larger share of migrants, it seems probable that the city does not exert such a bad influence as is generally assumed. It must also be pointed out that death rates in cities are falling, and that one must allow cities sufficient time to become adapted to the rapidly rising number of inhabitants, before passing a final judgment.

It is true that cities increased rapidly during the nineteenth century, but so did the entire population. Hence we must attempt to determine whether the proportion of persons living in cities has been increasing. The table below is incomplete, but does indicate that formerly a large proportion of the population lived in cities:]

Location	Year	Percentage	Authority
The Province, North and South Holland *	1740	75	Struyck, Estimate
The Province, North and South Holland	1795	60	First census
The Netherlands	1795	43	First census
The Netherlands	1906	66	Census
The Netherlands and Belgium	1814	29	Census
			Census
The Netherlands and Belgium	1825	42	Süssmilch
Prussia, eighteenth century	...	33	Weber
Prussia	1895	48	
England	1891	68	Weber
America	1890	37.7	Weber

* The population of both states was estimated as 980,000 by Kersseboom in 1736, and as 900,000 by Struyck in 1740. In 1753 the latter estimated it at only 800,000. Van Leeuwenhoek estimated it at 1,000,000. *Arcana natural, in epist. ad Grew. opp.*, Leyden, 1722, T. 2, p. 8. The population of the entire republic was estimated at two and one-third millions.

It is true that many investigations show that more city men are rejected for military service, that rachitis, poor teeth, and small circumference of chest are more frequently found in the city than in the country. . . . But decrease of military fitness cannot be our only criterion

in the face of changing conditions of life. It would be an entirely different matter if there were a decrease in the number of men able to support a family. . . . One ought to ask whether or not the physique or strength of the urban resident is sufficient to meet the needs of daily life, and not whether or not it is sufficient to qualify them for military service.

I will admit that the residents of cities are, in general, less healthy and strong than those in the country. Furthermore, the expectation of life is four years less in the city, and might be still less if there were not a constant migration from the country. Hence it might be desirable that the increase of the big cities, at least, might cease and that the population might spread itself over the country more.

[The table below shows the trend in migrations for Amsterdam, which is typical of the cities in the Netherlands. It takes account only of the increase due to an excess of migrants to the city over migrants from the city.]

Excess of Migrants to the City over Migrants from the City

Period	Annual Mean	Percentage of the Population
1795–1815	0 (–269)	0.00
1815–1830	1,480	0.76
1830–1840	814	0.39
1840–1850	1,317	0.60
1850–1860	521	0.20
1860–1870	937	0.30
1870–1880	2,955	0.99
1880–1890	4,180	1.10
1890–1900	2,294*	0.49
1901–1905	227	0.04
1902–1907	0 (–1,100)	0.00

* The increase due to the incorporation of suburbs was not included. But in computing the percentages the total number of inhabitants at the beginning of the year was used.

The significance of this table is unmistakable. The static condition or decrease of the population during the Napoleonic period was replaced by a decided increase immediately after Waterloo. This increase reached its climax in the years from 1880 to 1890. Then the excess of migrants to the city decreased once more, and today, despite the 565,000

inhabitants, it has again reached zero point of a hundred years ago.*

[That the migration to the cities is decreasing in Holland is shown in the table below.]

MEAN INCREASE OR DECREASE (IN THOUSANDS) OF MIGRATION TO THE CITIES IN HOLLAND

COMMUNITIES	INCREASE OR DECREASE IN THOUSANDS	
	1892–1900	1901–1906
100,000 and above	+12.5	+5.2
20,000–100,000	— 0.6	+0.6
5,000– 20,000	— 2.7	—2.0
5,000 and less	—11.9	—6.8

[The remainder of this article is concerned with land and agricultural reforms that might be adopted to take care of the increasing population when older agricultural methods are no longer sufficient.]

In conclusion, I would like to express the conviction that every abnormal and generally disadvantageous tendency compensates for itself in the long run, and that this compensation is delayed only where man interferes with the restraints of artificial laws.

169. GEORG VON MAYR: THE RURAL-URBAN AND OCCUPATIONAL DISTRIBUTION OF SUICIDES†

Frequency of suicide.—The following may be reported with regard to the investigations of the frequency of suicides in population groups of varying density.

Wagner collected varied material as to the frequency of suicides in city and country during the fifties, using partly direct and partly indirect methods of calculation. [The indirect method ascribes to a city a portion of the suicides equal to the ratio of urban residents in the given district.] In Prussia, Württemberg, and Hanover he found suicide indices of 173, 158, and 198 for the urban districts as compared with indices of 94, 84, and 120 for the respective rural districts. Similarly, in Belgium, Denmark, and Sweden he found urban indices of 61, 342,

* EDITORS' NOTE.—For further information on migration see chap. iv and chap. xxii of this *Source Book*. The data given in these chapters show that this conclusion of the author is premature and not well founded.

† Adapted from Georg von Mayr, *Statistik und Gesellschaftslehre*, Tübingen, Paul Siebeck, 1917, III, 273–276, 329–336. Translated and printed with the permission of the publisher.

and 149, as compared with rural indices of 34, 232, and 62. The indirect method of calculation also yielded suicide indices that increased as the proportion of urban residents increased. In those states for which such computations could be made, the indices increased especially with the proportion of residents in the large cities. For purposes of contrast, Wagner compared the suicide indices for the Department of the Seine (Paris) with those for the Department of Ariège: 357 and 20. He reported an exception in the case of Berlin and the adjacent district of Potsdam; the suicide index for Berlin from 1856 to 1858 was 171, as compared with an index of 208 in the government district of Potsdam. Wagner also reported a series of special investigations for individual cities. Aside from the frequency of suicides in metropolitan areas, which will be discussed below, the results of the painstaking research of Wagner may be summarized as follows: Suicide is regularly more frequent in the city than in the open country. It is more frequent in the great metropolitan cities, the centers of the material and intellectual interests of their respective countries, than in the smaller cities. But there is no direct causal relationship between the frequency of suicides and the proportion of urban residents or the presence of large cities. The similarity of the frequencies in city and country of related and homogeneous populations furnished the proof that certain great general causes determine the frequency in city and country equally and exert a more powerful influence than the city and country factors. . . .

Morselli draws no definite conclusions from his general international comparison of various states ranked according both to the frequency of suicides and the proportion of urban residents. Throughout, he finds a noticeable increase of the urban suicide rates in his separate calculations of city and country in individual countries. (He utilized census materials of 1850–1870. The dividing line between city and country was taken at 2,000.). . . In his work on suicides von Oettingen gives, among other things, a separate calculation of the amounts by which the suicide indices of the capitals of several countries (England, Saxony, Austria, France, Russia, and Prussia) are greater than the averages of the respective countries. He finds that for the period from 1878 to 1880 these cities showed the following excessive percentages: London, 22; Leipzig, 35; Berlin, 99; Vienna, 123; Paris, 151; and St. Petersburg, 543. . . . In my article on "Statistics of Suicide" in the *Handwörterbuch der Staatswissenschaften* I called attention to the special material that is constantly being published by the imperial board of health, which serves the cities of more than 15,000 inhabitants. A comparison of the results of these cities and the Empire as a whole reveals a considerably higher suicide rate in the cities in question.

Suicides per 1,000,000 Inhabitants in Germany

Year	In Cities of More than 15,000 Inhabitants	The Entire Empire
1902	262	214
1903	264	217
1904	250	210
1905	259	213
1906	255	204
1907	245	206
1908	267	219

In his discussion of the figures of 1888–1892 Rahts called attention to the fact that the suicide rate was highest in (1) the large harbor cities, such as Hamburg and Bremen, and (2) certain localities of central Germany, especially Saxony, Brunswick, and the Thuringian States. . . .

In an essay to be mentioned later Rost presents a special study of the frequency of urban suicides. He is concerned with the temporal development of the suicide rate compared with the intensity of the increase of population. He finds an overwhelming decrease of the suicide rate where there is a marked increase of population. He also examined the pertinent question as to whether or not suicides increase as the size of the city increases. He does not find this to be the case. Rost is correct in emphasizing that the urban type alone is not responsible for the difference in the suicide rates, but it seems a bit premature for him to stress the religious element as the primary and decisive one. The relationships between religion and suicide will be discussed later.

For the present it seems to me logically sound to stress that the agglomeration of populations, per se, and urban and metropolitan life, as such, certainly do not cause the differences in suicide rates. But the agglomeration of the population is undoubtedly an important contributing factor in the phenomenon of the relatively greater frequency of suicides in the large cities as compared with the surrounding rural, i. e., less metropolitan, population. In urban, and especially in metropolitan life, with its consequent distinct stratification and relatively greater strength of the decisive factors of stress and strain—which the statistician must carefully notice—we find a combination of factors that generally increases suicide rates.

. . . We are indebted to Krose for comments on the suicide rates of

sixteen different large cities in which he points out a range of over 400 in the number of suicides. Stockholm had the maximum, 420; Aix-la-Chapelle had the minimum, 106. Unfortunately his data are not all for the same period of time. Krose agrees with earlier investigators that the suicide rates of cities are generally higher than those of the country. But he finds that urban suicide rates vary decidedly in time and that the difference between them and rural suicide rates seems to be decreasing in recent years. However, it is still rather high in most countries.

The relationship between suicide and the size of certain large cities in Italy varies considerably also, but unfortunately the statistical yearbook of Italian cities presents only the number of suicides occurring in every thousand deaths. In Messina these were 1.3, 2.3, and 1.4 during 1904, 1905, and 1906. In Turin, on the other hand, they were 10.4, 12.7, and 13.9 during the same years. The question of especial interest to moral statistics—whether the persons committing suicide lived in city or country—has had little attention paid to it. The Danish statistics offer a special study of this sort. The frequency of suicides is greatest in Copenhagen; otherwise, with the exception of Jutland, there is no noticeable difference between city and country. For the period from 1896 to 1905 the suicide rate per 1,000,000 was 352 in the capital (Copenhagen and Frederiksborg); specifically, 376 in Copenhagen. In the remainder of the islands the cities, with the exception of the capital, had 224 suicides, and the country 226. In Jutland the cities had 170, the country 157.

In addition to what I have already indicated in the citations of studies of the frequency of suicides in cities, I would like to record a consideration that I have already expressed in my article on the "Statistics of Suicide" in the *Handwörterbuch der Staatswissenschaften*. It is a matter of social necessity that a much more thorough differentiation of the elements of a population take place in the decided agglomeration of human beings in cities, especially in great cities. But the increased frequency of suicides in cities is fundamentally only a phenomenon of a more pronounced differentiation of society. Those remote wishes and desires that are rarely translated into action in simple social relationships find relatively more people ready to take that action in the great masses that are found in cities. Our large cities express this social differentiation with its manifold results, both good and bad, most completely.

One form in which the manifold differentiation of the urban population, especially that of great world cities, appears is in their complicated composition. They contain the most varied elements in regard

to race, religion, nationality, and other social differentiations; in brief, there is little homogeneity in the elements of the population. It is probable that the contacts of such different social strata and environment is favorable to an increase of suicide rates. The extent to which the urban frequency of suicides is influenced specifically by it will have to be determined through further comprehensive comparisons.

A special study by Crum, cited by Brosch (see the attached bibliography), leads to the conclusion that in a number of American cities the frequency of suicides increases with the development in the heterogeneity of the nationalities represented in the cities.

In concluding the discussion of urban suicides it might be well to point to a special investigation of the frequency of suicides in the city proper and in the metropolitan area. In this connection the first question is that of the comparative suicide rates in the suburbs and the city proper, while the investigation of the metropolitan area covers a zone extending far into the country. In the past Wagner called attention to the fact, and today the conditions in and about Berlin and Paris . . . offer classical examples of the radiation of increased suicide rates from large cities (especially Paris). We see in both cases, especially in Berlin, that the central metropolitan area itself shows a lower suicide rate than the near-by parishes, which, however, do in part display the character of the large city. Jacquart in his very thorough investigation of suicide rates in Brussels and the surrounding territory found that this same relationship existed, though to a less extent.

But further differentiating investigations will be necessary for a full scientific clarification of this important phenomenon. The assumption that it would be easier to conceal a suicide in the central portions of a large city than in the surrounding districts probably has little foundation. It may be an important fact that urban residents probably more frequently leave the city to commit suicide than outsiders come into the city for the same purpose. But scientific clarity on this point can be achieved only by means of a thorough study of the statistics of suicides, differentiating especially according to the place where the suicide was committed and the place of residence of the suicide, prior to his death. A further differentiation among the urban residents would be that of natives and migrants, preferably separating the latter according to the time that has intervened between their moving to the city and their committing suicide.

The occupations of suicides.—Under the heading of occupational suicide rates I should like first of all to present the most recent data on the observations and calculations for several countries, where the population and the suicide group can be classified according to occupation.

NUMBER OF SUICIDES PER 10,000 GAINFULLY EMPLOYED

1. Agriculture, cattle-breeding, viticulture, and truck farming	1.1	14. Building trades	4.1
2. Fishing and hunting	0.3	15. Book and art printing	4.7
3. Mining and smelting	1.6	16. Applied arts	3.9
4. Work in stone and earth	3.5	17. Trade and insurance	5.8
5. Metal industries	3.7	18. Transportation	5.6
6. Manufacture of machines, tools, and instruments	3.8	19. Hotel and innkeeping	3.3
7. Chemical industries	3.0	20. Personal service	44.8
8. Production of heating and illuminating materials	2.0	21. Sanitation and nursing	3.4
9. Textile industries	3.1	22. Education	2.5
10. Paper and leather industries	3.9	23. Art, literature, and journalism	1.1
11. Wood and carving industries	5.0	24. Church, worship, and burial of the dead	4.5
12. Preparation of foods	4.8	25. State and community officials	5.1
13. Manufacture and cleaning of wearing apparel	3.8	26. Standing army and police	6.7
		27. All other occupations 28. No occupation specified	8.9

Prussia.—There is no exhaustive and comprehensive study that classifies suicides and the population according to occupation. Rehfish calculated the rates among 28 occupational groups in 1882. . . .

Only uncertain conclusions could be drawn concerning some of the industrial groups, where the absolute numbers were small. This is unavoidable when calculations are based on only one year. The rate of the group engaged in personal service is enormous, but in this group the statistician's demand for homogeneous groups has been met with the least success. I have asked the Imperial Prussian Statistical Bureau for new suicide data for 1895 and 1907, grouped by occupations. These data were grouped only under the main occupational divisions.

But the groups usually taken together—domestic service and varied employment—have been separated in this study. Domestic service includes persons engaged by members of all occupational groups; but the servants in the country who are engaged in agriculture, and not in housework, are included under agriculture. This is done in order to show the specific rates of persons engaged in domestic service. The rates have been secured by taking account of all members of an occupational group (those gainfully employed, as well as dependents). But agricultural laborers were included in the totals for agriculture. Thus we secure the following suicide rates for Prussia.

NUMBER OF SUICIDES PER 1,000,000 IN VARIOUS OCCUPATIONS IN PRUSSIA

OCCUPATION	MEN		WOMEN		TOTAL	
	1895	1907	1895	1907	1895	1907
Agriculture	224.5	220.0	55.7	58.7	136.7	133.8
Forestry	*	220.5	*	25.1	*	129.0
Mining, smelting, and salt works	127.8	109.5	12.3	12.1	74.5	66.1
Industry	282.8	279.1	43.3	53.8	169.7	176.0
Trade, insurance, transportation, lodging, and refreshments	425.7	374.2	65.1	79.5	242.4	227.7
Domestic service (excluding agricultural laborers)	518.3	521.4	171.2	193.3	206.3	215.6
Wage work of various kinds (excluding agricultural day laborers)	2,109.2	3,182.2	404.3	743.1	1,242.7	1,969.9
Public service	284.1	298.0	63.1	68.4	196.3	202.8
Without occupation, no occupation specified, and inmates of institutions	722.9	638.9	314.9	310.4	477.4	441.9

* Number in 1895 is included under agriculture.

The data for 1895 and for 1907 are in substantial agreement with each other. Accordingly, the rank order of the frequency of suicides would be as follows: The lowest rates are found among miners, salt-miners, and smelters; forestry follows with a considerable increase; and agriculture follows immediately after it. Higher suicide rates are found among manufacturers, as well as among public servants. Domestic servants are next and are followed by persons engaged in trade, and so on. The other two occupational groups of considerably higher suicide rates can, by virtue of their classification, yield only highly unreliable figures. It is entirely possible that the abnormally large number of suicides reported for the group engaged in employment of various kinds is due to the practice of classifying them as such when the suicide occurred during a period of temporary unemployment. In regard to the category, "Without occupation, or no occupation specified, and inmates of institutions," it is entirely possible that the report "without

occupation" is made more frequently and more incorrectly in an enumeration of suicides than in an enumeration of occupational groupings. Thus the suicide rate would be increased artificially. The inmates of institutions do not represent a homogeneous mass, as will be pointed out again in a discussion of the suicide rates among prisoners.

In the table it is of especial interest to note the suicide rate of domestic servants, as contrasted with the most frequently used, but inaccurate, rates of this group. It is high here, but not as exorbitantly so as is frequently claimed, or as the deceptive figures of Rehfish would indicate. In addition, it will still be necessary to secure the rates of domestic servants (*Dienstboten*) in the country. Nevertheless, it seems, in so far as the heterogeneous material permits any conclusion, that domestic servants in the country have a higher suicide rate than others engaged in agriculture and thus, in a sense, increase the rates of agriculture as a whole.

Bavaria.—The figures contained in the general report of the Bavarian sanitation commission . . . compare the suicides, divided according to occupation, with the persons active in those occupations. Thus, on the one hand, they include those actively employed as well as dependents; and on the other hand, in the figures for occupational divisions of the population at large, only those who are actively engaged in the occupation are included. Thus the ratio between the two groups has been calculated on an unequal basis, for the ratio of those active in any occupational group to those not active in that occupational group varies from one occupational group to the next. The suicide rates among the individual occupational groups and types are as shown [page 186], when the annual averages for 1891–1901 and 1902–1906 are taken.

Since the figures for the first three occupational groups listed below are based on large absolute numbers they permit one to see the low, and recently decreasing, suicide rate for agriculture. The rate for industry is more than double that for agriculture and the rate for trade and transportation is almost one-third larger than that for industry in general. It seems to me that caution is necessary in accepting the high rate for "personal service" from 1891 to 1901 and the low rate of the same group from 1902 to 1906. Here uniform treatment of suicide and general population groups is least guaranteed, as has already been indicated in another connection. Moreover, I shall recur to the problem of the suicide rates of domestic servants in the concluding remarks on occupational suicide rates. In general, the Bavarian statistics are characterized by a comparatively complete inclusion of the professions. These show a fluctuating high suicide rate. (Note especially hygiene and nursing.) Only "church, worship, and burial of the dead"

NUMBER OF SUICIDES PER 1,000,000 ACTIVELY ENGAGED IN AN OCCUPATION *

OCCUPATIONAL GROUP	1891–1901	1902–1906
Agriculture and forestry	157	137
Mining, building, industry in general	315	348
Trade and transportation	417	480
Personal service of all kinds	470	190
Hygiene and nursing	415	189
Army, police, and constabulary	453	313
Education	279	230
Officials in general (excluding officials in railroading, building, forestry)	445	454
Church, worship, and burial of the dead	125	132
Art, literature, and journalism	480	567
Persons living on income from capital, pensions, etc.	?	?
Paupers, inmates of institutions, and occupation unknown	?	?

* I am indebted to the *Königliches bayerisches statistisches Landesamt* for the compilation of the separate results for the years 1902–1906. (Ministerial Counsellor, Dr. Zahn.)

appear throughout with a rate below that of agriculture. Education also has a rather low rate. The highest rate is found for "art, literature, and journalism."

Italy.—The statistics as to causes of death generally do not give a compilation according to occupational groupings. Summarized suicide rates for farmers, foresters, shepherds, and day laborers (*braccianti*) only are presented. All computations of occupational suicide rates include only male suicides. Specifically, they compare the number of male suicides 15 years of age or over with the number of males 15 years of age or over who are members of that occupational group. Accordingly, the suicide rates of selected occupational groups are [as shown on page 187].

The favorable position of the clergy and so on, as well as of agriculturists, also reveals itself in this table. It is unique in Italian statistics that they include a separate report of capitalists and the wealthy (*Capitalisti e benestanti*), which goes beyond the occupational classification to touch upon economic position. Granted that some relationship can be established here, it is of especial importance because of the high suicide rate among those well situated economically.

Denmark.—The computation of occupational suicide rates for Denmark is beset with the same limitations as those for Italy. (Again we find male suicides over 15 years of age per 100,000 males of over 15

NUMBER OF SUICIDES PER 100,000 MEMBERS OF EACH OCCUPATIONAL GROUP IN ITALY, 1897–1906

Priests and monks	6	Officers and soldiers of the standing army and of the navy and military pensioners	35
Farmers, foresters, shepherds, and excavators	8	Doctors, dentists, and veterinarians	39
Seamen and fishermen	10	Field constables, police, customs, tax, and prison inspectors, and forest rangers	10
Spinners and weavers	17	Capitalists and the wealthy	46
Professors and teachers	24	Restaurantkeepers and dealers in wine	47
Servants, washers, and waterers	26		
Barbers	32		
Printers, lithographers, and bookbinders	32		

years in the given occupational group.) Minimum and maximum rates are much higher than in Italy, because of the generally higher suicide rate in Denmark. The average rates during the decade 1896–1905 show the lowest suicide rate among fishermen, 20; public officials and the professions follow with 30; lesser officials and agricultural laborers are next with 31, and are followed by agriculturists (owners, renters, and superior laborers) with 40. The most suicides are found among the aged living on the income from their estates, 117; paupers, etc., had 118; and all prisoners—those convicted, as well as those held for trial—had 505. However, the last figure is uncertain and undoubtedly too high, because it was not possible to relate this figure to the average annual prison population. Capitalists have a suicide rate of 57; the pensioners, one of 87.

Switzerland.—The Swiss figures are of especial interest, primarily because they offer a combination with eight age groups. These figures are compiled only for males over 16 years of age.

[The author presents a table of occupational suicide rates during the period from 1879 to 1890. In this table agriculture and dairying are listed with a rate of 48 and forestry with one of 83. The general average for Switzerland is given as 59. A similar table for the year 1889–1900 will be presented below.]

The peculiar position of forestry as compared with agriculture shows that Swiss foresters are less immune to suicide than foresters in other nations. This is probably due to the fact that many foresters are members of the police force as well. . . . The final result of the survey of the Swiss suicide statistics during the period from 1879 to 1890, which have been computed for occupational classes by age groups, is as follows: The differences among the age groups between the least and the greatest frequencies are significant. There are marked deviations. It

is not at all unusual for the rate of one occupational group to vary from one age group to another. Everywhere in the Swiss rates the farmers, millers, and teachers are below the average. Public officials, coachmen, butchers, cobblers, gardeners, watchmakers, tradesmen, innkeepers, and coopers have rates above the average.

. . . I am indebted to the kindness of Director Guillaume for the compilation of the number of male suicides in Switzerland between the years 1889 and 1900, according to the age groups that were recognized in the figures for 1879–1890.

NUMBER OF MALE SUICIDES PER 10,000 OF THE POPULATION, CLASSIFIED BY OCCUPATION AND AGE IN SWITZERLAND, 1889–1900 *

	All Ages	15–19	20–29	30–39	40–49	50–59	60–69	70–79	80 or over
Average for all occupations	5.0	1.1	3.6	5.1	6.8	9.5	9.6	8.6	6.4
Agriculture, viticulture and cattle-breeding.....	4.9	0.7	2.9	4.6	5.5	7.4	7.8	8.8	9.8

* The remainder of the table has been omitted.

The table below arranges the occupational groups in rank order according to the suicide rates per 100,000 in each occupation.

A comparison of these figures with those for 1879–1890 reveals a substantial agreement in the rank order of different occupational groups, and especially those of industry and the trades, despite the small absolute numbers in some of the groups. The unfavorable position in the table of teamsters and especially of coopers strongly suggests the influence of alcohol. In regard to the extremely high rate among day laborers, I refer again to what was said in regard to the rates among Prussian day laborers.

If one makes only a moderate attempt to get at the details, the data for occupational groups become so varied that a complete reproduction of the existing material is impossible. . . . But, even though we are in possession of the latest figures, we are not in a position to give a final exhaustive summary of the relationship between suicide and occupation. When one sees how busily Wagner in his day attempted to arrive at a well-rounded complex of hypotheses on the basis of comparatively incomplete data, one somewhat shamefacedly arrives at the conclusion that today we have only incomplete knowledge of the relationship between occupation and suicide. The occupational classification of suicides is still almost entirely neglected today. And,

SUICIDES PER 100,000 IN VARIOUS OCCUPATIONS

OCCUPATION	ORDER	OCCUPATION	ORDER
Lime- and brick-burning	26	Construction of wagons and tools	57
Cheesemaking, etc.	27	Forestry	57
Railroading	27	Tinsmithing	58
Embroidery	28	Persons living on the income from capital	58
Banking	29	Public service	64
Education	36	Masonry, etc.	64
Postal service	38	Ironworking, blacksmithing	65
Mining	40	Roadbuilding, etc.	65
Smelting (Iron)	40	Butchering	72
Bookprinting	41	Shoemaking	74
Silk industry	42	Cabinetmaking	74
Building	42	Locksmithing	76
Painting (art)	43	Tailoring	77
Agriculture, etc.	49	Watch and clock making	77
Carpentry and glazing	49	Innkeeping	79
Baking	53	Trade	80
Woodcutting	53	Teaming	82
Without occupation, etc.	53	Truck farming	82
Occupation not specified	54	Stone cutting	87
Milling	54	Cooperage	99
Cotton industry	55	All kinds of day labor	279
Physicians	56	*Swiss Average*	*50*

in general, there are almost insurmountable difficulties in a proper comparison of the occupational grouping of suicides with the occupational grouping of the population, a problem that is especially difficult in the case of the rather important question of the suicide rates of domestic servants. The chief labor of clarifying by statistics the relationship between suicide rates and occupation thus remains one for the future development of moral statistics; for the present, existing figures make possible only fragmentary explanations.

170. ÉMILE DURKHEIM: THE MAIN FACTOR IN SUICIDE *

Egoistic suicide.—If one examines the map of European suicides, one sees at a glance that in purely Catholic countries, like Spain, Portugal, and Italy, there is little suicide, while it is at its maximum in the Pro-

* From Émile Durkheim, *Le suicide: Étude de sociologie,* 2d ed., Paris, Felix Alcan, 1912, pp. 149–174, 182–223. Translated and printed with the permission of the publisher.

testant countries of Prussia, Saxony, and Denmark. The following means per 1,000,000 inhabitants, calculated by Morselli, confirm this tentative conclusion:

Suicide Rate per 1,000,000 Inhabitants

Protestant countries	190
Countries with various religions	96
Catholic countries	58
Greek Orthodox countries	40

Nevertheless, the low rate of suicide in Greek Orthodox countries cannot be attributed definitely to religion, for the great difference in type of civilization could be the cause of this low tendency towards suicide. . . . [In order to make sure that religion is responsible for the difference we must] determine with greater precision the influence of Catholicism and of Protestantism on the tendency to commit suicide by comparing the two great religions in the midst of the same society. Of the great states in Germany, Bavaria has very much the smallest number of suicides. It has had scarcely 90 per 1,000,000 annually since 1874, while in Prussia there were 133, in Baden, 156, in Württemberg, 162, and in Saxony, 300. In Bavaria Catholics are most numerous, 713.2 per 1,000 inhabitants. When, on the other hand, one compares the different provinces of this kingdom, one finds that suicides vary directly with the number of Protestants and inversely with the number of Catholics. . . .

Switzerland offers a field for interesting study on this point, for one finds there both French and German inhabitants and may observe the influence of religion upon each race separately. The Catholic cantons yield only one-fourth or one-fifth as many suicides as Protestant cantons, regardless of nationality. Religion is thus a factor dominating or outweighing all others. One can also determine directly the number of suicides per 1,000,000 inhabitants of each confession. For instance, the table below, based on the work of many scholars, shows that the Protestants, without exception, commit suicide much more than the followers of other religions.

The tendency of Jews to commit suicide is always less than that of Protestants and frequently less than that of Catholics, although to a slighter degree. However, this last relationship is often reversed, especially in recent times. Until the middle of the century Jews killed themselves less frequently than Catholics in all countries except Bavaria (this country is still an exception). It was only around 1870 that this group [Jews] began to lose its former privileged position. It is

SUICIDES IN DIFFERENT STATES PER 1,000,000 MEMBERS OF EACH CONFESSION

STATE AND YEARS	PROTESTANTS	CATHOLICS	JEWS	OBSERVER
Austria, 1852–1859.....	79.5	51.3	20.7	Wagner
Prussia, 1849–1855.....	159.9	49.6	46.4	Wagner
Prussia, 1869–1872.....	187.0	69.0	96.0	Morselli
Prussia, 1890.....	240.0	100.0	180.0	Prinzing
Baden, 1852–1862.....	139.0	117.0	87.0	Legoyt
Baden, 1870–1874.....	171.0	136.7	124.0	Morselli
Baden, 1878–1888.....	242.0	170.0	210.0	Prinzing
Bavaria, 1844–1856.....	135.4	49.1	105.9	Morselli
Bavaria, 1884–1891.....	224.0	94.0	193.0	Prinzing
Württemberg, 1846–1860.....	113.5	77.9	65.6	Wagner
Württemberg, 1873–1876.....	190.0	120.0	60.0	Durkheim
Württemberg, 1881–1890.....	170.0	119.0	142.0	Durkheim

still rare for the rate among Jews to exceed much that among Catholics. . . .

Although the fact of being a minority class may lead a group to preserve all its members to assure perpetuation of the group, it can be shown that this is not the chief factor in these foregoing conclusions. It is in the nature of the two religious systems that the difference in rates is to be found. . . . Both religions prohibit the act of suicide equally stringently, punish it equally severely, and utilize the same divine sanctions. . . . The sole essential difference between Catholicism and Protestantism is that the latter consents to free inquiry and thinking to a greater extent than does the former. . . . The Catholic receives his faith ready-made, without examination. He cannot even submit his faith to historical verification, since the original texts, on which it is based, are forbidden to him. A great hierarchical system of authorities organized with marvelous art has made tradition invariable. All variation is regarded with horror by Catholic thought. The Protestant is, in a sense, the author of his own belief. The Bible is placed in his hands, but no interpretation is imposed upon him. Even the structure of the reformed church fosters this religious individualism. Nowhere, except in England, is the Protestant clergy hierarchical. The [Protestant] priest speaks only his own opinion, from his own conscience, as do any of the faithful. This clergy is a more informed guide than the mass of believers, but it possesses no special authority to fix the dogma. . . .

We thus arrive at this first conclusion that the penchant for suicide among Protestants must be in relation to the spirit of free criticism that animates this religion. Let us now try to understand this relationship.

Open criticism or examination is itself only an effect of another cause. When it made its appearance, when men, after having long received their faith from tradition, reclaimed the right to make it themselves, it was not because of the intrinsic attractions of free inquiry, for this brought as many sorrows as joys. It was because they henceforth had need of that liberty, and this need arose because traditional beliefs had broken down. . . . Consequently, if Protestantism gives more emphasis to individual judgment than does Catholicism, it is because it includes fewer common beliefs and practices. No religious society exists without a collective creed, and a society is stronger and more unified when the credo is more extensive. . . . The more a confessional group yields to the judgment of individuals, the more the credo is absent from their lives, the less it has of cohesion and vitality. We thus conclude that the higher rate of suicide among Protestants results from the fact that the Protestant church is less strongly integrated than the Catholic.

The situation of Jews may be explained in the same way. Their persecution by the Christians throughout the ages has created particularly strong sentiments of solidarity among them. The necessity of struggling against general animosity, the impossibility of even communicating freely with the rest of the population has forced them to keep themselves rigidly compact. . . . In addition, the ostracism from which they suffer is only one of the causes producing this result, while the nature of Jewish beliefs contributes in a large masure. Judaism, like all smaller sects, consists essentially of a body of practices that minutely regulate all the details of life and allow no room for individual judgment. Many facts confirm this explanation. . . .

The spirit of free criticism and examination cannot be awakened without being accompanied by a desire for learning. . . . When traditional beliefs have lost their authority, it is necessary to appeal to the light of science. Men desire instruction only in the same degree that they cease to be bound by tradition. . . . If the progressive weakening of collective beliefs and practices tends towards suicide, and if it is from this source that Protestantism derives its special potency, one is led to affirm the two following facts: (1) the thirst for education and learning should be more intense among Protestants than among Catholics, and (2) in so far as this thirst denotes a weakening of common beliefs, it should vary with suicides. Do the facts confirm this double hypothesis? Among the Protestant peoples (of Saxony, Norway, Sweden, Baden, Denmark, and Prussia) of 1,000 children of school age (from 6 to 12 years), there were 957 attending school during the year 1877–1878; among the Catholic peoples (of France, Austria-Hungary, Spain, and Italy) only 667 or 31 per cent fewer children were attend-

ing school. For the year 1874–1875 and the year 1860–1861 the results are similar. The Protestant country with the lowest percentage, Prussia, with 897 pupils out of 1,000 children, is still above France, which leads the Catholic countries with 776 pupils out of 1,000 children. Bavaria, which has the most Catholics of all Germany, has also the greatest number of illiterates. . . . The Protestant countries have attached such great importance to primary education partly because they deemed it essential for each individual to be able to interpret the Bible.

Our first proposition thus is demonstrated. It is necessary to prove the second. Is it true that the need of instruction, in proportion as it weakens the common faith, encourages suicide? The fact that Protestants are better educated than Catholics but kill themselves more often gives us the first verification of this assumption. This generalization may be verified, however, only when we compare the various faiths. It may be observed equally well within each religious sect.

In Italy, which is almost entirely Catholic, popular education and suicide are distributed in the same way. Not only do the means of groups of provinces correspond but the respective ranks of the separate provinces show a close relationship. The same observations may be made in France. The departments where there are the greatest number of illiterate husbands or wives (over 20 per cent) . . . are relatively free from suicides. In general, among the departments where there are more than 10 per cent of married persons unable to read or write, there is not one belonging to that region of northeastern France which is the classical seat of French suicides. One finds the same parallelism among the Protestant countries.

Many other facts may be brought forth to support the preceding statements. The liberal professions and the well-to-do classes are undeniably those where the taste for science is the more vividly felt and where the intellectual life is lived more completely. Although the statistics of suicides cannot always be established with sufficient precision according to classes and occupations, there is no doubt that suicide is exceptionally frequent in the upper classes. In France from 1826 to 1880 the liberal professions led in this respect by furnishing 550 cases per 1,000,000 persons in that class, while domestic servants, the next class in order, had only 290. Morselli was able to distinguish the persons in Italy devoted solely to study and found that they committed suicide more frequently than the other groups in proportion to their numerical importance in the population. In fact, he estimated that for the period from 1868 to 1876, the student class contributed 4,826 suicides per 1,000,000 and the military 404.1; the general average for the country was only 32. In Prussia (1883–1890) the group of public offi-

cials, which is recruited with great care and constitutes an intellectual aristocracy, led all other groups with 832 suicides. The sanitary service and teaching groups, although falling far below, had 439 and 301, respectively. Similar conditions prevail in Bavaria.

In the second place, we have seen that in all countries of the world women are less subject to suicide than men. They are also less well educated. Essentially fundamentalists, they guide their lives according to established beliefs and feel no great intellectual desires. In England there is less relative difference in the numbers of illiterate husbands and wives than in the rest of Europe, and the difference in suicide rates is also the least of all European countries. Judaism, which has an excellent educational organization and low suicide rate, seems to be an exception to the above. This is because minority groups are forced to be well trained in order to survive; even Protestants show a greater thirst for education when they are a minority group. Learning does not replace tradition, it merely strengthens it. Thus learning that is not due to a breakdown of conventional beliefs is not a factor tending towards suicide. . . .

From the preceding observations two important conclusions follow: (1) We have seen why, in general, suicide increases with learning and science. Learning, as such, does not cause this increase, and it would be unjust to make such an accusation. The example of the Jews illustrates this point. The two facts are the joint products of the same general situation manifesting itself in these two forms. Man seeks to learn yet kills himself because the religious society of which he is a member has lost its cohesion and integrity. He does not kill himself because he has studied or become educated. It is not even the instruction that he has acquired that disorganizes his religion, but it is because his religion became disorganized that the need of instruction became awakened. . . . A developed science may actively combat traditional ideas, but science arises because these ideas have begun to be inadequate. (2) We see why religion generally has a preventive influence upon suicide. This is not because of moral condemnation, religious threats, or the special nature of religious conceptions. . . . Religion protects one against the desire to destroy oneself, not because it preaches with arguments about respecting one's personality but because it is a society. That which constitutes this society is the existence of a certain number of beliefs and of practices that are common to all the faithful. These are traditional and, consequently, obligatory. The more numerous and vigorous these collective traits are and the more strongly integrated the religious community is, the more also does it have a preservative influence. The details of the dogmas and rites are secondary. The essential thing is that these be of such a nature as to maintain the collective

life at a sufficient intensity. And it is precisely because the Protestant church has not the same degree of solidarity as the others that it does not exercise the same moderating influence over suicide. If religion preserves from suicide only when, and in proportion as it is, a society, it is probable that other societies have the same effect. Let us examine the family and political society from this point of view. . . .

On the basis of these data [not reprinted here] we formulate the following laws: (1) Marriages that are too precocious exercise an aggravating influence on suicide, especially among men. . . .

(2) After twenty, married persons of both sexes benefit in comparison with those unmarried. The extent of this benefit increases towards middle age and then declines. . . .

(3) The extent or amount of benefit received by married persons (measured by a "coefficient of preservation") varies according to sex. . . . We affirm that the sex more favored in the state of marriage varies according to the society and that the amount of spread between the rates of the two sexes varies also according to the nature of the more favored sex. . . .

(4) Widowhood decreases the benefit gained by marriage among both sexes, but it does not usually suppress it altogether. Widowers kill themselves more than married men but also, in general, less than unmarried. This phenomenon also is different among the different sexes. The more favored sex in the state of widowhood varies among societies, and the difference in the rates of the two sexes varies according to which sex is more favored. . . .

We must try to explain the established facts. The immunity enjoyed by married men can be attributed only to one of the two following causes: (1) It may be due to the influence of the domestic environment. It would then be the family that by its action would counteract the penchant for suicide or prevent its appearance entirely. (2) It may be due to what may be called matrimonial selection. Marriage in a large population acts as a sort of sieve. Not everyone who may wish to do so marries. One has few chances of founding a family successfully unless one embodies certain qualities of health, wealth, and morality. Those not having a certain combination of these traits are rejected for marriage according to this hypothesis and will probably have greater rates of suicide, and so on. . . . There are many evidences that the benefit received by married persons is not due principally to selection of certain types for marriage.

If suicide were indeed the result of a process of matrimonial selection, this result would become evident at the beginning of the selective operation, that is, at the age when young men and women begin to marry. One would find at this age the first appearance of a differ-

ence in rates of the two classes, married and unmarried. This spread would increase as the selection continued to operate, that is to say in proportion as marriageable persons married and ceased to be confounded with that rabble which is predestined by its nature to form the class of irredeemable celibates. The maximum would be reached at the age where the good grain is completely winnowed from the chaff, at which all the population who may or will become married are so, the age at which there remain single only those destined to this state by their physical or moral inferiority. This period occurs between the ages of thirty and forty. Now, as a matter of fact, the coefficient of preservation follows an entirely different law. At first it is frequently replaced by a coefficient of aggravation. The youngest married folks are more inclined to suicide than the group of unmarried. This would not be true if they possessed an inborn immunity against suicide. Secondly, the maximum is reached almost immediately. From the first age at which the privileged condition of married persons is evident (between 20 and 25 years), the coefficient quickly reaches a figure that it rarely exceeds thereafter. . . .

On the other hand, this selection, in whatever manner it operates, ought to affect men and women equally, for wives are recruited in the same manner as are husbands. If, then, the moral superiority of the married persons is simply the result of selection, it should be equal among both sexes, and similarly it should be immune to suicide. In France the husbands are relatively more protected than the wives in comparison with those persons remaining unmarried. . . . Family life exercises a differential effect upon the moral constitution of the two sexes. This is attested by the increasing benefit perceived as the duration of marriage increases. It is thus in the constitution of the family group that the principal cause of the phenomena that we are studying is to be found.

Despite the great interest of this conclusion, it needs still more refinement, for the domestic environment is composed of different elements. For each mate, the family includes: (1) the other mate and (2) the children. Is it to the first or to the second that we must attribute the salutary effect on the tendency to suicide? In other words, the family is composed of two different associations—there is the conjugal group and the familial group, strictly speaking. These two groups do not have the same origins, nor the same nature, nor, consequently, to all appearances the same effects. One is derived from a contract and personal preferences, the other from a natural phenomenon—consanguinity. The first joins two members of the same generation, the second links one generation to the next. The former is as old as humanity, the latter appeared only at a relatively late period. Since they differ at

this point, it is not certain, a priori, that they work entirely concurrently in producing the result we are observing. If both contribute, it would not be in the same manner nor, probably, to the same extent. It is then important to determine both the relative rôle of each and whether both factors are operative.

We have at hand one proof of the mediocre efficiency of marriage in the fact that nuptiality has varied little since the beginning of the century, while suicide has trebled. From 1821 to 1830 there were 7.8 marriages per year per 1,000 inhabitants, 8.0 from 1831 to 1850, 7.9 from 1851 to 1860, 7.8 from 1861 to 1870, 8 from 1871 to 1880. During this time, the toll of suicides per 1,000,000 inhabitants rose from 54 to 180. From 1880 to 1888 nuptiality slightly declined (from 8 to 7.4), but this decline was unrelated to the enormous increase of 16 per cent of suicides during the same period. Furthermore, during the period from 1865 to 1888, the average nuptiality of France (7.7) was nearly equal to that of Denmark (7.8) and of Italy (7.6), while these countries are as dissimilar as possible as to suicide.

There is a much more decisive means of measuring precisely the true influence of conjugal association upon suicide. This is to observe the phenomenon where conjugality alone is operative—where there are households without children. During the years from 1887 to 1891, a million mates without children yielded annually 644 suicides. A million celibates with similar age distribution had 975 suicides. Thus sterile mates had a coefficient of preservation of only 1.5 ($975/644 = 150/100$); they killed themselves only one-third less frequently than unmarried persons of similar age. The situation is quite different when there are children. A million married persons with children yielded annually during the same period only 336 suicides. This figure is to 975 as 100 is to 290. Thus when marriage is fruitful, the coefficient of preservation is nearly doubled (2.90 as compared with 1.5). Conjugal society then plays only a weak part in the immunity to suicide of married persons. In this comparison we have unduly emphasized the rôle of the conjugal factor by assuming that childless mates had the same ages as married persons in general. . . . Another fact indicating the limited influence of marriage alone is that widowed persons with children are in a better situation than married persons without children. The rate among the former is 937 per 1,000,000. When the death of a mate has no result other than to break the conjugal bond, it has only slight facilitating influence on the tendency to suicide of the survivor. The wife profits more than the husband from fruitful marriage, but conjugal society alone is not beneficial to the wife. The rate among wives with children is not so much lower than the rate among spinsters as the corresponding rates among men are. . . . Thus the immunity

of married persons in general is due wholly for one sex and largely for the other to family ties rather than to conjugal society. . . .

The table below summarizes the facts that have just been established.

THE INFLUENCE OF THE FAMILY ON SUICIDE FOR EACH SEX

CLASS	SUICIDE RATE PER 1,000,000	COEFFICIENT OF PRESERVATION IN PROPORTION TO THAT OF UNMARRIED PERSONS
Bachelors 45 years of age	975	1.0
Husbands with children	336	2.9
Husbands without children	644	1.5
Bachelors 60 years of age	1,504	1.0
Widowers with children	937	1.6
Widowers without children	1,258	1.2
Spinsters 42 years of age	150	1.00
Wives with children	79	1.89
Wives without children	221	0.67
Spinsters 60 years of age	196	1.00
Widows with children	186	1.06
Widows without children	322	0.60

It is certain from a study of this table and from the preceding remarks that marriage exercises a peculiar preservative influence against suicide. But this influence is limited, and, moreover, it is largely of benefit to a single sex. The essential factor of the immunity of married persons is the family—the complete group formed of parents and children. . . . The mates contribute to this result, not as husband and wife, but as father and mother.

If we examine the inadequate statistics available, we find the following relationships [table, page 199] between suicide and the effective size of family in the French departments. [By "effective size" the author means the actual size of the family living at home.]

The suicide rate diminishes regularly as the size of families increases.

To say that one group has less common life than another is to say also that it is less strongly integrated, for the state of disintegration of a social aggregate only reflects the intensity of the collective life that circulates within it. It is much more unified and much more persistent when the relationship between the members is more active and more continuous. The conclusion to which we have come may therefore be

stated thus: just as the family is a powerful preservative against suicide, so it is a more effective influence when it is more strongly integrated.

If the statistics only extended to an earlier period, it would be easy to show in this way that this law applies to political societies as well. History shows us that suicide, which is generally rare in young societies still in the process of evolution and of concentration, multiplies as they disintegrate. In Greece and Rome it appears that, following the breakdown of the ancient city organization, suicide appeared and increased regularly with the decadence of the societies. One observes the same fact in the Ottoman Empire. In France, on the eve of the Revolution, the breakdown of the ancient régime and decomposition of the old social organization was manifested by a sudden increase in suicides. This is attested by the writers of the time.

Aside from these historical evidences, the actual statistics of suicides (although extending back only 70 years) furnish us several proofs of these propositions that are more precise than the previous statements. Many writers affirmed the stimulating effect of great political upheavals upon suicides. Morselli, however, has clearly shown that the facts contradict this opinion. All the revolutions that have occurred in

A Comparison of the Number of Suicides per 1,000,000 and the Size of the Family in France

Departments	Suicides	Membership per 100 Families
Group 1–11	430–380	347
Group 2– 6	300–240	360
Group 3–15	230–180	376
Group 4–18	170–130	393
Group 5–26	120– 80	418
Group 6–10	70– 30	434

France in the course of this century have decreased the number of suicides from the moment of their beginning. The total cases fell from 1,904 in 1829 to 1,756 in 1830, a decrease of 10 per cent. In 1848 they decreased to 3,301 from 3,647 in 1847. During 1848 and 1849 the crisis that had just shaken France spread throughout Europe. Everywhere suicides diminished and the decrease was more marked wherever the crisis was more serious and prolonged. This is shown by the table below.

SUICIDE RATES PER 1,000,000 IN VARIOUS COUNTRIES

DATE	DENMARK	PRUSSIA	BAVARIA	SAXONY	AUSTRIA
1847.....	345	1,852	217	...	611 (in 1846)
1848.....	305	1,649	215	398	...
1849.....	337	1,527	189	328	452

In Germany emotion had been much more intense than in Denmark, and the struggle more lasting than in France, where a new government was organized immediately. The diminution [of suicide] in the German states prolonged itself until 1849. The decline in suicides to this year was 13 per cent in Bavaria, 18 per cent in Prussia, and 18 per cent in Saxony during the single year of 1848–1849 alone. In 1851 and in 1852 the decline did not continue in France. The suicide rate remained stationary. But in Paris the coup d'état produced its usual effect. Although this event occurred in December, the toll of suicides fell from 483 in 1851 to 446 in 1852 (—8 per cent) and in 1853 it was again 463. This fact tends to prove that the overthrow of the government had stirred Paris more than the provinces, which seem to have remained almost indifferent to it. In general, the influence of these crises is always more marked in the capital than in the departments. In 1830 the decrease in Paris was 13 per cent (269 cases instead of 307 in 1829 and of 359 in 1831), and in 1848 the decline was 32 per cent (481 cases in place of 698 in 1847). Even simple electoral crises of slight intensity often have the same result. . . . The great national wars have the same influence as political troubles. In 1866 the war between Austria and Italy began, to be followed by a 14 per cent decline in suicides in each country. . . .

SUICIDE RATES PER 1,000,000 IN ITALY AND AUSTRIA

COUNTRY	1865	1866	1867
Italy	678	588	657
Austria	1,464	1,265	1,407

The war of 1870–1871 had the same consequences in France and Germany.

One can perhaps believe that this decline is due to the fact that in time of war a part of the civil population is recruited and that in the field accurate records of suicides are impossible. But women show a decline in the suicide rate as well as men during crises. In Italy the

female suicide rate was 130 in 1864 and 117 in 1866; in Saxony it was 133 in 1863, 120 in 1864, and 114 in 1865, a decline of 15 per cent. . . . Not all political or national crises have this influence upon suicides but only those that excite the passions. Wars produce their moral results more strongly among the more impressionistic and urban populations actively engaged in war. This may only be explained by the fact that such social commotions as great popular wars quicken the collective sentiments, stimulate the spirit of party as well as of patriotism, political faith as well as national faith, and direct all activities towards a single end that determines, at least for the moment, a stronger integration of the society. It is not to the crisis, as such, that this moderating influence is due, but rather to the struggles of which that crisis is the cause. Since men join in order to oppose a common danger, the individual thinks less of himself and first of the common good. One understands that this integration cannot be purely momentary, but often persists after the initiating causes have become quieted.

Suicide Rates per 1,000,000 in France and Germany

Country	1869	1870	1871	1872
Prussia	3,186	2,963	2,723	2,950
Saxony	710	657	653	687
France	5,114	4,157	4,490	5,275

We have then established that suicide varies inversely with the degree of integration of religious, domestic, and political society. This comparison shows that when different societies have a moderating influence upon suicide, it is not a result of the characteristics peculiar to each, but because of a cause common to all. It is not in the special nature of religious sentiments that the preservative effect of religion lies, because the domestic and political societies, when they are strongly integrated, produce the same effects. This has been shown by comparing the differential effects of various faiths upon suicide. Conversely, it is not to the specific character of domestic or political bonds that immunity should be attributed, for the religious society has the same influence. The cause may be found only in a quality possessed by all these groups, although in different degrees, perhaps. The only quality that satisfies this condition is that all are social groups and strongly integrated. We come, then, to the general conclusion that suicide varies inversely with the degree of integration of the social groups of which the individual is a member.

171. Francesco Coletti: Rural and Urban Vital Processes in Italy *

The population devoted to agriculture numbered 9,085,597 individuals in 1911. It may be divided into the following four classes: (1) country day laborers, numbering 4,216,000 individuals and constituting 46.40 per cent of the whole; (2) farmers who work upon their own land or upon the land of their family, numbering 1,715,000 individuals and constituting 18.88 per cent of the whole; (3) those engaged in agriculture under the metayer system, numbering 1,581,000 individuals and constituting 17.41 per cent of the whole; and (4) croppers, numbering 694,000 individuals and constituting 7.64 per cent of the whole. Since this last class is relatively small, it is possible to make a still further synthesis and state that the great majority of our agricultural population is composed of farm laborers, small proprietors, and tenants.

Among the vital processes—marriages, births, and deaths—marriage presents the least variation between one region and another. In the years from 1909 to 1913 the average annual marriage rate was 7.63 per 1,000 inhabitants. The regions that surpassed this average were predominantly rural. The minimum marriage rate, 6.69 per 1,000 inhabitants, was found in Liguria, which is typically commercial and industrial. The maximum marriage rate was found in the central and southern regions, including Sicily but excluding Sardinia, which has particular characteristics affecting the vital processes. Calabria and Basilicata have rates of 7.97 and 7.95, respectively, Umbria had a rate of 8.38, and in the province of Marche we found a rate of 8.31. All of these provinces are regions that are either exclusively or at least predominantly rural in their character and productions.

The proportion of births, in contradistinction to that of marriages, varies greatly from region to region. The birth rate may be considered as one of the most sensitive and significant of all criteria that pertain either to population per se or to the social life in general. Despite the danger inherent in formulating laws of wide application, we may affirm that the birth rate of a region is positively related to its rural characteristics, increasing when they increase, and vice versa.† By rural characteristics we mean not only the nature of the resources and production, but also all such moral characteristics, like customs and tradi-

* From Francesco Coletti, *La popolazione rurale in Italia,* Piacenza, Federazione Italiana dei Consorzi Agrari, 1925, pp. 61–72. Translated and printed with the permission of the publishers.

† Editors' Note.—See the details in Livio Livi's paper given in this chapter.

tions, as give to a relatively homogeneous population its *Gestalt* and its soul. In the years from 1901 to 1913 the average annual birth rate for Italy as a whole was 32.3 per 1,000 inhabitants. The lowest rates were those in Liguria and Piedmont. These two regions are affected both by their proximity to neo-Malthusian France and by very frequent migratory movements. In addition, Liguria is industrial in character and the people are engaged in commercial and maritime activities. We found a high rate in Venetia (36.7 births per 1,000 inhabitants). This region is typically rural, and there is much emigration to regions in which the birth rate has been maintained on a high level. We found high rates all over central and southern Italy. The highest birth rate, 37.6 per 1,000, was found in Puglie, a region with a high percentage of agricultural laborers.

The variability of the death rate from region to region is intermediate between that of the marriage rate and the birth rate. It is not possible to formulate any complete and simple generalization concerning the death rate such as we have done for the birth rate. There are typically rural regions that have relatively low death rates. Other regions not less typically rural have death rates high in comparison to those of regions equally rich in agriculture and industry. The general average death rate for Italy as a whole was 20.0 per 1,000 population. Agricultural and industrial Lombardy had a mortality of 20.5. There was a relatively low death rate in the central regions of Italy, which are predominantly rural. But in the southern regions, also predominantly rural, there was a high death rate. In Basilicata and Puglie the death rate was 22.7. The phenomenon is not influenced by the rural composition in itself but rather by the rural type. In Tuscany, Marche, Umbria, and so on, the inhabitants of the country are rarely subject to such endemic diseases as malaria, whereas the contrary is true in the continental and insular south. In addition, the high crude mortality of the southern regions is partly explicable by the high birth rate. Since children have a higher death rate, a larger proportion of children in a population will raise the crude general death rate artificially. Age standardization is necessary to secure a comparison.

The rural population is subject more or less to the dynamic tendencies that the three conditions of marriage, birth, and death exhibit in the nation as a whole. We cannot ignore them. However, marriage rates tend to maintain themselves upon the same horizontal line among predominantly rural populations. The constancy is even more consistent and regular when observed in the rural population alone. The family is a very stable institution in the country districts. A part of the

births that are registered in the vital statistics as illegitimate are so recorded as a result of the custom under the old régime of solemnizing marriage only by religious rites. Thus many rural births, technically regarded as illegitimate, are not due to immoral practices. This condition obtains especially in the provinces included in the old papal state.

If birth rates taken as a whole tend to become lower because of the practice of birth control, this trend will be more marked among industrial laborers in urban centers than among the country population. The religious spirit of the peasants, particularly of the women, is opposed to any methods of the artificial restriction of births. Military conscription and the free life of emigration here and there seem to influence the old, solid, and moral resistance to birth restriction. Nevertheless, it is reasonably certain that the birth rate in the country will be higher than that in the city for many years to come. It is to the country people, above all, that Italy owes her conspicuous predominance of births over deaths. (In the years from 1909 to 1913 the average annual rate of natural increase was 12.3 per 1,000 inhabitants.)

In some regions, especially the southern central ones, the decrease of the crude death rate may be less in the rural than in the general population. But this does not seem to apply to the entire rural population of the kingdom. In our vital statistics we find one tabulation that may give us some indication of comparative mortality. The title of this statistical work expresses its contents: "Male deaths at the age of 65 years and above, classified according to profession, for every 100 deaths at the age of 25 years and above for the same profession." It is evident that the greater the quota of deaths of those 65 years of age and above in an occupation, the less is the comparative mortality of the class. In 1905, the earliest period for which we could make comparisons, the death rate of males 65 years of age and above as thus computed was 54 in all professions and 58 among farmers or country people. In 1913 it was 57 in all professions and 63 among farmers. All professions taken together gained three points, while the farmers gained five points. This is a very good indication of the more rapid decline of rural mortality, due in the main to the more successful control of pellagra and malaria. Formerly these diseases victimized the farmers more than any other class. Pellagra, one of the plagues of the country a decade ago, is now unquestionably disappearing. Malaria, successfully checked with preventive and mechanical means, has been reduced more gradually than pellagra. The dynamics of these two diseases constitute one of the surest and strongest indications of the diffusion of hygiene and prosperity among the rural masses.

172. Livio Livi: Influence of Industrialization and Urbanization upon the Birth Rate Movement *

Two very conspicuous circumstances, one historical and the other geographical, lead us to regard the progressive industrialization of the country as exercising a direct and unfavorable influence on the birth rate.

One circumstance is deduced from the two historical series that we have already examined above: that of the birth rate and that of the indices of the industrial development of the country. It consists of the fact that the grave depression of the birth rate, which began in the three-year period from 1889 to 1891 and is still in existence, was accompanied by a progressive increase of our industries.

The other circumstance, also well noted and commonly commented upon, is that the birth rate when examined from the standpoint of geographical distribution is usually found to be lower in the industrialized zones and higher in the agricultural zones. Such being the situation, it is uncertain therefore whether industrialization as such or urbanization is responsible for this difference.

In the field of the social sciences the determination of direct causality between two phenomena is extremely difficult. One of the errors most commonly committed by the incompetent and by beginners is to declare merely on the basis of figures showing concurrent variation that a causal relationship exists.

Social phenomena, by nature, have always more than one cause; B may be the effect of both A and C, and of other conditions. Scientific analysis must determine whether A is less important than C—if the causal action of one or the other can be isolated in a given situation—and whether besides A and C there exist other causes, and so on. Let us examine the data in order to determine the comparative influences exercised by industrialization and by urbanization on the birth rate.

Birth Rate in Relation to Frequency of the Industrial Population and of the Urban Population

The inverse relationship between the height of the birth rate and the frequency of the industrial laborers is shown in the table below.

The figures refer to different dates, to the three-year periods 1900-1902 and 1923–1925, respectively. (The data on the industrial laborers are taken from the results of the census of 1901 and 1921.)

* From Livio Livi, "Il problema della natalità in rapporto alla produzione agricola ed industriale," *Rivista di politica economica,* Anno XIX, Fascicolo II, pp. 16–32 (1929). Translated and printed with the permission of the author.

BIRTH RATE INDICES ACCORDING TO THE PROPORTION OF THE INDUSTRIAL POPULATION AND OF THE URBAN POPULATION IN THE PROVINCES OF ITALY

PERCENTAGE OF MALES OVER TEN YEARS OF AGE ENGAGED IN INDUSTRY (IN THE CENSUS OF 1901 AND OF 1921)	1900–1902 (ANNUAL AVERAGE)	1923–1925 (ANNUAL AVERAGE)
Less than 18	33.2	32.3
18–21	34.1	30.1
21–24	33.0	29.4
24–27	31.6	28.5
27–30	34.4	26.3
30–33	35.0	27.2
33 and over	30.6	25.0
For the whole	32.2	29.0

Immediately a very important relationship presents itself: while the decrease in the birth rate with the increase of the frequency of the industrial laborers is very evident during the three-year period from 1923 to 1925, it is not at all recognizable during the three-year period from 1900 to 1902. If, in the course of these twenty-three years, the conditions of the national industry had not been subject to any modifications, this difference in behavior of the two series would have given convincing evidence of the lack of influence of industrialization, regarded in a strict sense, on the birth rate. In that case the decrease of the birth rate parallel to the increase of the laborers in the series covering 1923 to 1925 could be explained, not only as an effect of industrialization as such, but also as an effect of other depressive factors that had developed parallel to the industrialization and not necessarily where the industrialization was greatest.

Instead, it is a fact that in the course of these twenty-three years the industrial conditions have been subject to a great modification accentuating the transition from the régime of the artisans or the régime of small factories to the era of large factories.

Therefore, in order to interpret scientifically the diverse behavior of the two series, it is necessary to test the influence of the other possible factor—urbanization. Let us now examine how the birth rate behaves as a function of urbanization, the other phenomenon that may be pointed out as the possible cause of a low birth rate.

We have found a measure of the intensity of urbanization and variations presented by this phenomenon for every province of the kingdom in the following way: The last census of the population gives in

a special table [1] the population of urban centers having a population of over 15,000 inhabitants. (Note that we speak of urban centers and not of communities.) Of these same centers we have found the population according to the census of 1901. Having determined, furthermore, for every province on the basis of the data of every census, the total number of the inhabitants in these centers, we have found the proportion of the urban population in the total population of these same provinces.

The relationship between birth rate and urbanization during the two periods 1900–1902 and 1923–1925 is illustrated in the table below.

LIVE BIRTHS PER 1,000 INHABITANTS IN SIXTY-NINE PROVINCES OF ITALY

PERCENTAGE OF URBAN POPULATION (CENTERS OF OVER 15,000) IN PROVINCE (CENSUS OF 1921)	1900–1902		1923–1925	
	All Provinces	Exclusive of Puglie and Sicily	All Provinces	Exclusive of Puglie and Sicily
Less than 5	34.2	34.2	31.7	31.7
5–10	34.1	34.1	31.4	31.4
10–15	32.4	32.4	28.3	28.3
15–25	31.0	30.4	26.5	26.3
25–35	29.0	29.0	27.1	22.7
35 and over	33.8	31.1	27.1	24.5
As a whole	33.2	32.8	29.0	28.7

There are some provinces in southern Italy, especially those of Puglie and Sicily, that have a very dense agricultural population. It is in these provinces that the factor of urbanization has its greatest intensity although it is of a special character. The statistics that we have presented for the two periods have been obtained from the data of the sixty-nine provinces taken together and exclusive of the ten provinces of Puglie and Sicily.

As we can see, the four columns demonstrate the existence of the inverse relationship between the two phenomena (birth rate and urbanization). This inverse relationship is more noticeable during the period from 1923 to 1925 and especially noticeable in those figures obtained exclusive of the ten provinces mentioned. However, this inverse relation is also noticeable for the period from 1900 to 1902.

On examining the figures of the birth rate in their relation to the amount of urbanization, it is found that the inverse relationship be-

[1] *General Relations,* Census of the Population of the Kingdom on December 1, 1921, XIX, p. 118.

tween these two phenomena (contrary to the relationship verified between the birth rate and industrialization) seems to have existed longer than is actually supposed.

It seems, then, that urbanization began to have an unfavorable influence on the birth rate much earlier than is usually realized and that this influence in every case is more directly effective than the influence exercised by industrialization.

We express this proposition in tentative terms not only because, as we say, the industrial development in our country has only recently achieved such proportions as to make its influence noticeable upon the birth rate, but also, in particular, because the figures so far examined are arranged in such fashion as to give rise to ambiguous conclusions.

In fact, a great urbanization is accompanied, although not necessarily, by a great development of industry; therefore, the inverse relationship between the birth rate and urbanization may, theoretically, depend upon the fact that the provinces most urbanized are also those most industrialized. And vice versa, the analogous relationship between the birth rate and industrialization may depend on the fact that the provinces most industrialized are also those most urbanized.

With these two alternative explanations in mind, it now becomes necessary to consider the decrease of the birth rate as a function of industrialization, eliminating wherever possible the eventual effect produced by the unequal degrees of urbanization.

The only way to obtain this result is to classify and to combine the provinces of the Kingdom according to the percentage of urban population and the percentage of industrial population.

Birth Rate in Relation to the Frequency of the Urban and the Industrial Population (1921)

Number Engaged in Industry per 100 Males Ten Years of Age or Over	Percentage of Urban Population in Total Population						Taken as a Whole
	5 or less	5–10	10–15	15–25	25–35	35+	
Less than 18	31.7	33.9	32.2	...	...	...	32.3
18–21	28.5	32.0	28.1	30.4	...	...	30.1
21–24	39.3	31.4	30.8	24.9	33.9	29.2	29.4
24–27	...	31.3	22.7	28.8	...	31.2	28.5
27–30	...	...	29.0	22.3	23.7	26.8	26.3
30–33	...	28.0	...	31.7	21.8	...	27.2
33 and over	27.9	23.8	27.7	...	...	23.8	25.0
Taken as a whole	31.7	31.4	28.3	26.5	27.1	27.1	29.0

The results of the classification and combination are incorporated in the table above, which shows in the vertical columns how the birth rate varied with the frequency of the industrial laborers within certain restricted and constant limits of urbanization. The horizontal columns show how the height of the birth rate varied with the variations in the frequency of urban population within certain restricted and constant limits of the frequency of the industrial laborers.

Taken as a whole, these data are not very clear. In nearly all of the vertical columns the birth rate diminishes with the increase of the frequency of laborers. In nearly all of the horizontal columns the birth rate diminishes with the increase of the frequency of urban population.

The results do not change very much when there are excluded from our calculations the ten provinces previously mentioned of Puglie and of Sicily, in which the rural population dwells in great urban centers but in which the birth rate is maintained on a high level.

AVERAGE BIRTH RATE (1923–1925) IN RELATION TO THE FREQUENCY OF THE URBAN AND THE INDUSTRIAL POPULATION (1921)
(Exclusive of the ten provinces of Puglie and of Sicily)

MALES ENGAGED IN INDUSTRY PER EVERY 100 MALES TEN YEARS OF AGE AND OVER	PERCENTAGE OF URBAN POPULATION IN TOTAL POPULATION						TAKEN AS A WHOLE
	5 or less	5–10	10–15	15–25	25–35	35 and over	
Less than 18	31.7	33.9	32.2	...	...	...	32.3
18–21	28.5	32.0	28.1	30.4	...	...	30.1
21–24	39.3	31.4	30.8	24.9	...	29.2	29.2
24–27	...	31.3	22.7	28.9	...	...	26.9
27–30	.....	...	29.0	22.3	23.7	...	26.9
30–33	...	28.0	...	31.7	21.8	...	27.2
33 and over	27.9	23.8	27.7	...	...	23.8	25.0
Taken as a whole	31.7	31.4	28.3	26.3	22.7	24.5	28.7

The ambiguity of these results may be due to the fact that in pushing our analysis to the level of a less superficial investigation we have reduced too greatly the numerical completeness of those single groups that are particularly important for the major part of this investigation. It is appropriate to limit the observation to that part of the distribution where the majority of the provinces group themselves, and which is, therefore, a little more representative than the rest. This part is represented by an area that has a frequency of urban population of 15 per cent and a frequency of labor population of 24 per cent. Within these percentage limits there fall 30 of the 59 provinces considered:

9 of which are in northern Italy, 7 of which are in central Italy, and 14 of which are in southern Italy. This group can be designated as representative from the standpoint of geography. For purposes of examination the data are set forth below.

Males Engaged in Industry per Every 100 Males Ten Years of Age and Over	Percentage of Urban Population in Total Population			Taken as a Whole
	5 or less	5–10	10–15	
Less than 18	31.7	33.9	32.2	32.3
18–21	28.5	32.0	28.1	30.1
21–24	39.3	31.4	30.8	32.1

The following are the principal conclusions that can be obtained from these data:

(a) In this large group of provinces the total birth rate does not tend to decrease with the increase of the frequency of laborers.

(b) In the class of the province in which the frequency of the males engaged in industry is between 21 and 24 per cent (and in which their frequency is greater than that of the whole kingdom) the birth rate is noticeably higher than the birth rate of the whole country.

In conclusion, this minute analysis of the phenomenon, though it remains still tentative, does not support the general impression that there is a great geographical coincidence between low birth rate and industrialization. This coincidence depends rather on the direct and indirect unfavorable action of other social factors connected with a high urbanization, but not upon the direct action exercised by industrial occupations.

VARIATIONS OF THE BIRTH RATE ACCORDING TO THE FREQUENCY OF THE URBAN AND INDUSTRIAL POPULATION

Still another and a more important study may be undertaken in order to obtain a confirmation of the conclusion previously mentioned that there is a geographical coincidence between a low birth rate and urbanization. Up to this point, we have observed the average relationship between the intensity attained by the birth rate and the intensity attained by the urban industrial laboring population. But if one or the other of these two variables is causally united with the frequency of births an evident relationship should be noted between the intensities of the variations attained by these same phenomena.

Thus we have calculated the degree of variation in the birth rate in all of the provinces of the kingdom during the three-year periods

from 1900 to 1902 and from 1923 to 1925, and the difference between the frequency of persons in industry and of those living in urban centers between the census for 1901 and the census for 1921 (considering as usual those centers that had in 1921 a population of over 15,000 inhabitants).

The connection between the variations of the birth rate and the variations of the industrial population are presented in statistical form in the table below.

One of the greatest obstacles to an adequate comparison of these figures is the difference in the conditions existing between northern Italy and southern Italy. We attempted, therefore, to make our first calculations on the basis of all the ancient provinces of the kingdom (see column a), and our second calculations on the basis of the northern and central provinces.[2]

NUMERICAL INDICES OF THE BIRTH RATE IN 1923–1924 (CONSIDERING THE BIRTH RATE OF 1900–1902 AS 100) ACCORDING TO VARIATIONS IN THE FREQUENCY OF THE INDUSTRIAL LABORING POPULATION

VARIATIONS IN THE FREQUENCY OF THE LABORING POPULATION FROM 1901 TO 1921	ALL OF THE PROVINCES OF THE KINGDOM (a)	PROVINCES OF SOUTHERN AND CENTRAL ITALY (b)
Decrease 1 per cent and more	86.5	82.1
1 per cent to 0	92.5	...
Increase from 0 to 1 per cent	97.7	84.9
from 1 per cent to 2 per cent	91.5	89.5
from 2 per cent to 3 per cent	80.3	84.1
from 3 per cent to 4 per cent	80.2	80.2
from 4 per cent to 5 per cent	82.4	79.7
from 5 per cent to 6 per cent	84.5	85.1
of over 6 per cent	71.7	71.7
Taken as a whole	87.3	82.1

The result of this calculation is very interesting. Let us examine column a of the table. The average index number representing the birth rate presents a double inverse movement. The group of provinces that had the greatest decrease in the frequency of laboring population had also a decrease in the birth rate greater than that of the average. In that group of provinces that had a decrease in the frequency of the laboring population of less than 1 per cent, we find that the decrease

[2] Thus excluding the Abruzzi, Campania, Basilicata, Puglie, Calabria, Sicily, and Sardinia.

in the birth rate is less. We also find that the decrease in the birth rate is less in those provinces in which the increase in the laboring population was not greater than 1 per cent. In the succeeding group, in which the increase was between 1 and 2 per cent, we also find a decrease but its index remains above that of the kingdom. In the other groups, on the other hand, the index becomes decidedly lower than the average index, and has (with some fluctuation) a great progressive decrease. A similar decrease is even more evident in the average relative results in the more homogeneous group of southern and central provinces (column b). In this group the index of the birth rate increases until it reaches that class in which the increase of the laboring population was between 1 and 2 per cent. Afterwards it decreases, even though this decrease is as marked as it is in column a.

It is the aim of our investigation to ascertain the greater or lesser importance and the greater or lesser direct unfavorable influence that either industrialization or urbanization has upon the birth rate. Consequently it is of the greatest interest to compare these results with those that follow in regard to the variations of the birth rate as a function of the variations attained by the frequency of urban population.

In the table below, in which, as in the preceding table, we have devoted one column to the provinces of central and southern Italy, the greatest amount of evidence reveals the fact that in the provinces in which the frequency of urban population decreased there was no decrease in the birth rate (while it did decrease materially in those prov-

THE NUMERICAL INDICES OF THE BIRTH RATE IN 1923–1925 (CONSIDERING THE BIRTH RATE FOR 1900–1902 AS 100) ACCORDING TO VARIATIONS IN THE FREQUENCY OF THE URBAN POPULATION

VARIATIONS IN THE FREQUENCY OF THE URBAN POPULATION 1901 TO 1921	ALL PROVINCES OF THE KINGDOM (a)	PROVINCES OF SOUTHERN AND CENTRAL ITALY (b)
Decrease	101.9	99.0
Increase from 0 to 1 per cent	89.8	84.0
from 1 to 2 per cent	90.3	87.2
from 2 to 3 per cent	87.8	86.5
from 3 to 4 per cent	65.3	63.6
from 4 to 5 per cent	87.1	84.7
from 5 per cent and over	76.7	73.1
Taken as a whole	87.3	82.1

inces that had a decrease in the frequency of the industrial laboring population). On the other hand, in those places in which there was an increase in urbanization the birth rate was always markedly decreasing. The birth rate taken as a whole seems to decrease very noticeably as urbanization becomes more marked.

This different behavior of the two statistical relationships confirms, therefore, the assumption, already pointed out, that the existing antithetical relationship between the birth rate and the development of industry is due to several other unfavorable factors, not necessarily connected with industry. Urbanization appears to be one of the most apparent of these factors, although this existing antithetical rate seems to be the result of many other circumstances that scientific analysis does not as yet permit us to isolate statistically.

THE BIRTH RATE IN RELATION TO FREQUENCY OF FEMALE LABORERS ENGAGED IN INDUSTRY

A circumstance obscuring the investigation undertaken, as the opaqueness of one lens may obscure the vision through a microscope, is the fact that while we have been able to measure directly and sufficiently correctly the intensity of the variations of urbanization territorially, we have not been able to measure this intensity as to industrialization.

To measure the intensity of the variations of this industrialization we have used as an indirect criterion of it the frequency of the industrial laborers obtained from the census. This attribute has the advantage of having a demographic character (a favorable quality since we are examining industrialization in connection with another demographic phenomenon—the birth rate), but it also has a disadvantage in that it is inaccurate. For it is not always true that industrialization itself, or the average development of industry, with the exclusion of the development of the artisans, is connected proportionally with the number of laborers obtained from the census. Even though, roughly speaking, it may be affirmed that where one condition is intense the other is intense also, there are certain notable exceptions to this general statement. For these reasons we have tried to check the results on the basis of another important attribute of industrialization. The frequency of females from the ages 15 to 50 is recorded, by law, in the National Office of Maternity. We are now concerned with those female laborers engaged in industrial establishments who are insured by law in case of childbirth or abortion.

Although the married, as well as the unmarried, are insured; although female artisans are not insured, and although employment of

female labor is a principal characteristic of the middle class, the statistics from the National Office of Maternity constitute an excellent index of industrialization.

In 1924, the year for which we have made our calculations, the total number of female laborers insured was 738,563, of which 698,191 were from northern and central Italy. Referring these figures to those obtained in the demographic census of 1921 (there were 1,240,019 women of 10 years or over engaged in industry within the old boundaries, and 999,494 in northern and central Italy exclusive of the new provinces)[3] we may say approximately that the women insured by the National Office of Maternity constituted about 60 per cent of all women laborers reported by the census as engaged in industry. If we limit our investigation to northern and central Italy, this proportion may be considered as 70 per cent. To this we may add that the National Office of Maternity includes in northern and central Italy approximately all of the female laborers who are not engaged in purely artisan work. Thus we may take, in every province of northern and central Italy, the frequency of the female laborers recorded as a criterion of industrialization.

Though the employment of females in industry is a relatively recent development, which has been accompanied by the expansion of the middle class and of industry, this statistical criterion (the number of insured females recorded by the National Office of Maternity) presents a very appropriate means of evaluating the increase in industrialization. In the table below the provinces were grouped according to the frequency of women recorded by the National Office of Maternity. The birth rate was computed for every group, as well as the character of its variations in the three-year periods from 1900 to 1902 and from 1923 to 1925.

Let us examine the first characteristic, the height of the birth rate in column a. The birth rate although low in the first two groups (approximately 24 and 28 per cent) rises to 31.8 per cent in the two successive groups for a frequency of female laborers of 2 to 2.5 per cent. Then there follows a decrease, at first gradual and later very rapid. Thus, we can roughly affirm that the height of the birth rate remains unaffected by a frequency of female laborers of 1.5 to 3.5 per cent but that lesser and greater frequencies are usually accompanied by a lower birth rate.

When from this observation we pass over to the observation of the movement of the birth rate (column b) this conclusion does not

[3] In 1924 female laborers of the new provinces (provinces obtained by Italy in the World War) were not insured.

vary. We see that the birth rate during the period from 1900–1902 to 1923–1925 decreased slowly in those provinces in which the frequencies of the female laborers varied between 1.5 and 4 per cent, while in the provinces with greater and lesser frequencies of the female laborers it decreased very rapidly.

THE AVERAGE BIRTH RATES IN 1923–1925 IN THE PROVINCES OF CENTRAL AND NORTHERN ITALY (CLASSIFIED ACCORDING TO THE FREQUENCY OF THE WOMEN RECORDED BY THE NATIONAL OFFICE OF MATERNITY AND BASED ON THE BIRTH RATE OF 1900–1902 AS 100)

PERCENTAGE OF FEMALE LABORERS 10 YEARS OF AGE AND OVER RECORDED	NUMBER OF LIVE BIRTHS PER 1,000 INHABITANTS (a)	INDEX OF THE BIRTH RATE IN 1923–1925 (b)
0– 1 per cent	27.8	81.2
1.0– 1.5 per cent	24.8	81.5
1.5– 2.0 per cent	29.2	91.0
2.0– 2.5 per cent	31.8	87.7
2.5– 3.0 per cent	28.4	84.1
3.0– 3.5 per cent	28.5	85.2
3.5– 4.0 per cent	27.2	88.4
4.0– 5.0 per cent	20.5	68.4
5.0– 6.0 per cent	28.9	80.2
7.0–10.0 per cent	25.5	75.3
10.0–20.0 per cent	22.1	69.7
20.0 and over	31.4	82.6
Taken as a whole	...	82.1

It may perhaps be superfluous to indicate that these results are also disturbed by urbanization; this is especially notable in those provinces that are more industrialized. In order to eliminate, at least partially, the effect of this disturbing factor we have computed this correlation only for those provinces in which from 1901 to 1921 the increase of the aggregate urban population was less than 4 per cent.

Of the 44 provinces considered above, the following 10 are excluded: Turin, Milan, Genoa, Reggio Emilia, Modena, Florence, Livorno, Pisa, Rome, and Ancona.

In this group of 34 provinces—more homogeneous than the preceding group—the changes in the birth rate during the twenty-year period considered depict more clearly the conditions described above.

BIRTH RATE IN RELATION TO PERCENTAGE OF FEMALE LABORERS

PERCENTAGE OF FEMALE LABORERS 1924	INDEX OF THE BIRTH RATE 1923–1925
0– 1.0	81.2
1.0– 1.5	82.4
1.5– 2.0	90.5
2.0– 2.5	87.7
2.5– 3.0	84.1
3.0– 3.5	91.3
3.5– 4.0	98.3
4.0– 4.5	66.2
5.0– 7.0	80.2
7.0–10.0	75.2
10.0–20.0	76.8
Over 20	82.6

The decrease in the birth rate appears less grave with the increase in the frequency of female laborers from 0 to 2 per cent. In the successive groups up to 4 per cent the decrease of births is even less; it becomes conspicuously greater with more than 4 per cent of the female laborers. We may also say that where the industrialization of female labor has made the least progress during the last twenty or thirty years, the birth rate has had an average decrease greater than that for the whole country. This decrease, however, was the greatest where industrialization had its greatest progress. On the other hand, where the progress of industrialization was normal the decrease in the birth rate was less pronounced than the total average decrease.*

CONCLUSIONS

This historical and geographical examination of the Italian birth rate permits us to draw the following tentative conclusions:

(1) The important geographical correlation between the increase in the frequency of the industrial laboring classes and the decrease in the birth rate is due, in great part, to the fact that industrialization is accompanied by urbanization.

(2) The statistical formulas that we have been able to use seem to demonstrate that urbanization per se has a more unfavorable influence on the birth rate than industrialization.

* EDITORS' NOTE.—The author's valuable analysis does not take into consideration the age composition of the women (and men) of the provinces compared. If this factor had been taken into consideration and the computations had been made for the standardized population, the results might have been different in regard to the factor of industrialization.

It is a significant fact that in all the zones in which industrialization is slow or decadent the birth rate decreased more than the average decrease, while in those zones in which industry had a noticeable development, without being too pronounced, from 1901 to the present time, there was less decrease in the birth rate.

(3) The birth rate, lowered in the three-year period from 1889 to 1891 by the continuous and progressive action of social factors, has been still more sensitive in regard to the economic factor. In fact, when we ignore the downward fluctuations in the course of the secular trend, it is evident that the yearly variations of the birth rate are the consequence, for the most part, of variations in production. Everything that increases the national production (at least everything that does not coincide with the depressive secular factors) must be considered as having a favorable influence on the birth rate.

This consideration may aid us to look with less pessimism upon the actual crisis in the birth rate and upon the fact that the birth rate, as well as the marriage rate, is maintained at a low level in spite of the energetic intervention of notable governmental provisions.

This tendency of the birth rate, as well as of the marriage rate, to remain low may be, in fact, justified on the ground that it may be due in great part to the persistent crisis in production. The average increase per individual in the production of wheat, corn, and wine, which in the last five years before the War was 333 kilograms, in the five years from 1920 to 1924 was only 291 kilograms, and even though it rose to 313 kilograms in the three-year period from 1925 to 1927, it remained notably lower than before the War.

On the other hand, the industrial production, maintaining a low quota until 1923, began to rise rapidly in 1924 and in 1925; but in the two following years and especially in 1927 it decreased markedly. The results of our investigation lead us to maintain that an increase in industrial and agricultural production, of which we have already some comforting evidences, accompanied by the energetic purifying action developed by Fascism, may be able to alter this troublesome condition.

The skeptics,* who regard as absolutely inefficient any curative propaganda and repressive action in favor of a higher birth rate and who base their arguments on the principle that economic betterment, towards which humanity must tend, can come about only by lowering the birth rate, are not correct.

And neither is that less respectable skepticism correct that regards the measures of the Fascist state as futile. These skeptics forget

* Editors' Note.—These and subsequent paragraphs represent a defense of the population-politics of Fascism directed towards heightening the birth rate of the population of Italy.

that such a program as that of our government cannot be realized in a short time. They should, finally, bear in mind the obstacles that hold industrial and agricultural production in check. It is noteworthy that climatic conditions have not helped the program, which has been concerned with the awakening of agriculture in our country. This is particularly true in regard to the crop of 1927, which was one of the very poorest.

This fact, unless my investigation is totally incorrect, has its effect on the present birth rate. And we should not expect an interruption in the downward trend in the birth rate even though industrial production is better in 1929 or in 1930 than it has been in the past.

This skepticism is derived from a consideration of the social life from the standpoint of that materialism so characteristic of the past generation. It comforted itself with a belief that collective human life in its many complexities was ordered by purely physical and external forces. It forgot that human life has as its principal force the human will and that this will is governed by a soul capable sometimes of heroism, frequently of sacrifice, and almost always of understanding a sense of duty.

The government proves itself enlightened by the fact that while it directs all of the national efforts to remove the external obstacles that may turn the people from the path indicated by duty, it insists not only upon indicating that path but also incites the people to overcome the obstacles.

173. Johannes Müller: Marital Fertility in Large German Cities *

It is a well-known fact that the large German cities show a smaller degree of fecundity than communities of any other size. Though during the years from 1924 to 1926 (according to *Wirtschaft und Statistik*, Sonderheft 5, page 15) the average crude rate of marital fecundity in Germany as a whole ran up to 143.5, that of the large cities showed only 89.3, and in communities with less than 100,000 inhabitants it amounted to 166.5. The comparison between the two crude rates 143.5 and 89.3 is not quite representative, since not only the birth rate but also the rate of marital fertility depends decidedly upon the age composition of the wives. And this age composition of the wives is less favorable in the large cities than it is in the country as a whole. The age composition of all wives up to the age of 45 years, according to the census of 1925, was as follows for Germany and the large cities:

* From Johannes Müller, "Die eheliche Fruchtbarkeit in den deutschen Grossstädten," *Allgemeines statistisches Archiv*, XIX, 165–173 (1929). Translated and printed with the permission of the publishers and the editor of the *Archiv*.

AGE COMPOSITION OF WIVES IN CITIES AND IN GERMANY AS A WHOLE, 1925

AGE IN YEARS	GERMANY	LARGE CITIES
15–20	0.5	0.5
20–25	9.6	8.5
25–30	22.3	21.1
30–35	24.2	24.7
35–40	22.9	24.0
40–45	20.5	21.2
Total	100.0	100.0

Since only in the last few years have the younger women had a higher birth rate than the older ones it is obvious that the married women of the large cities cannot show the same crude rate of fertility as the population in general. Unfortunately, the standardized fertility of the individual age groups of married women for the country as a whole and the large cities as a whole is not known; it is only known for particular parts of the country and for some large cities. Nevertheless, the publication of the material on hand gives some information regarding the standardized fertility of various age groups that permits us to correct the crude marital fertility of the city and the country. The standardized fertility rates for the age groups are published among others for Hesse; the average fertility rate is 141.8, a rate which is quite close to that of the entire country (143.5) when one considers the age composition of the married women of Hesse and of the entire country. When one uses the Hessian fertility rates in the different age groups as a basis, one reaches an average fertility rate of 138.4 for Germany as a whole. This differs from the actual figure, 143.5, only by 5.1 points or scarcely by 4 per cent. The supposition that Germany, as a whole, shows approximately the same amount of fertility in each age group of married women as Hesse is almost correct. If this supposition is considered correct the figure of the country, which is to be compared to the figure of the large cities (89.3), would be 139.3. If, on the other hand, the data of fertility of eight large cities published on another page . . . are employed as a basis, and if one recalculates the crude rate of fertility in large cities—89.3—according to the age composition of married women in the entire country, one finds a fertility rate for large cities of 92.7, which would be comparable with the actual figure for the entire country, which is 143.5. Through both methods of standardization the crude rate of marital fertility in large cities is bettered (by calculation) by only approximately 3.5 per cent.

However, this 3.5 percentage is of scarcely any importance in view of the great difference existing between the figure of marital fertility of the entire country and that of the large cities; and even after reaching the recalculated figure for large cities we come to the conclusion that the large cities have only 64.6 per cent, which is not quite two-thirds, of the fertility of the entire country. This fact is shown, in particular, by the figures published recently in a book of Burgdörfer's (*The Decline of the Birth Rate and Its Control,* Berlin, 1929), which show that even the rate of fertility of the entire country is not sufficient to guarantee the German people its present number....

Not only is it of interest to find out how high the rate of marital fertility is in individual large cities, compared with the average figure of all large cities; it is of far more importance to know the answer to the question as to how much individual large cities fall short of the average marital fertility rate of Germany, when the age composition of the wives is standardized. . . .

The attempt at such a standardized calculation might be undertaken in the following manner: the figure of marital fertility as we have accepted it above for the entire population (Hessian figure of marital fertility according to *Wirtschaft und Statistik,* Sonderheft 5, page 17, with the addition of 4 per cent) is used as the basis for the standardized age classes of married women in large cities. On this basis is calculated the "fertility debit" that the individual large city should have according to the age composition of married women if each age class had the same rate of fertility as a corresponding age group had in the whole country. The figures are given in the table below.

The most important and probably the most surprising result of such a calculation is the fact—which can hardly be disputed in spite of the uncertainty of the estimation—that the standardized marital fertility of only one large city—Hamborn—barely reaches the average of the entire country; even large cities with a young industrial population, such as Gelsenkirchen and Bochum, already fall, respectively, 4 and 8 per cent below the marital fertility of the country as a whole. Between 80 and 90 per cent of the fertility rate of the entire country are still to be found in Essen, Königsberg, and Mühlheim; between 75 and 80 per cent in Dortmund and Cologne; close to 75 per cent are to be found in Elberfeld and Breslau. At the other extreme is Berlin with a rate of fertility less than half of that of the country; most of the "old" large cities show rates that lie only between 50 and 60 per cent of the rate for the country: Munich 54.8 per cent; Dresden 55.2 per cent; Leipzig 56.7 per cent; Magdeburg 58.2 per cent; Frankfort on the Main 58.6 per cent; Hamburg 58.7 per cent, and Nuremberg 59.5 per cent.

Cities	Fertility Debit	Actual Figure of Fertility	Difference	Actual Figure of Fertility in Percentage of Debit
Munich	132.8	72.8	—60.0	54.8
Berlin	132.7	62.4	—70.3	47.0
Frankfort on the Main	133.3	78.1	—55.2	58.6
Dresden	134.1	74.0	—60.1	55.2
Leipzig	134.5	76.2	—58.3	56.7
Breslau	137.7	100.9	—36.8	73.3
Hanover	138.6	82.4	—56.2	59.5
Hamburg	138.9	81.5	—57.4	58.7
Chemnitz	138.3	91.9	—46.4	66.4
Magdeburg	140.6	81.8	—58.8	58.2
Königsberg	143.3	118.9	—23.4	83.6
Elberfeld	139.7	103.6	—36.1	74.2
Mannheim	140.0	99.6	—40.4	71.1
Nuremberg	142.2	84.6	—57.6	59.5
Cologne	143.9	111.9	—32.0	77.8
Halle	146.7	99.8	—46.9	68.0
Essen	148.1	126.4	—21.7	85.3
Mühlheim am Rhine	152.3	122.9	—29.4	80.7
Dortmund	150.9	120.4	—30.5	79.8
Bochum	153.0	140.9	—12.1	92.1
Gelsenkirchen	160.2	153.4	− 6.8	95.8
Hamborn	170.1	171.5	+ 1.4	100.8

174. Paul Meuriot: The Effect of Large Cities upon the Physical Constitution of the Inhabitants *

Urban agglomerations present interesting peculiarities from the anthropological point of view. It is certainly true that a racial type cannot be preserved as definitely in the city as in the country, for it is constantly being changed by the introduction of new elements. Brocà, for instance, attempted to demonstrate this fact for the population of Paris.[1]

It does not appear that cities as such exercise any unfavorable influence on the stature of the inhabitants. Quetelet found that the con-

* Adapted from Paul Meuriot, *Des agglomérations urbaines dans l'Europe contemporaine,* Paris, Belin Frères, 1898, pp. 373, 383–387. Translated and published with permission of the publishers.

[1] See Brocà in the *Bulletin de la société d'anthropologie,* 1863. The author attempted to demonstrate the change in the Parisian type by comparing 125 modern skulls with 115 skulls of the twelfth century. He found a superior frontal development and an increase of 35 cubic centimeters in the cranial cavity of the modern skulls. But to what extent can this data of his be regarded as conclusive?

scripts from Brussels, Louvain, and certain other cities were taller than those from the surrounding countrysides. Investigators in Saxony found that the country had only a slight advantage in regard to height. In France tall stature is found in the north and the northeast and short stature in the west and south. There is no difference between the urban and rural populations in any of these sections.[2] All that one can conclude from the French data is that good living and hygiene exercise an obvious influence. The height of the conscripts from Paris is, on the average, higher among those from the richer western quarters (maximum, 1.660 m. in the 8th *arrondissement*) and lower among those from the poorer eastern quarters (minimum, 1.637 m. in the 20th *arrondissement*).

Comparative Survival at Various Ages of Native Born of France as a Whole and the Department of Seine (Paris)

Ages in Years	Survivors per 10,000 Births	
	France as a Whole	Seine (Paris)
0–5	7,035	4,897
5–10	6,620	4,675
10–15	6,392	4,561
15–20	6,111	4,313
20–30	5,452	3,567
30–40	4,880	2,918
40–50	4,227	2,288
50–60	3,353	1,588
60–70	2,163	847
70–80	714	247
80–90	61	22

A German anthropologist, Otto Ammon, devoted particular attention to the question of the influence of migration on the bodily type of individuals.[3] He compared the city and country recruits from the districts of Freiburg and Karlsruhe in the Grand Duchy of Baden. The conscripts from the cities were taller, but those from the rural districts had a greater thoracic breadth. The dolichocephalics were more numerous in the cities and the brachycephalics in the country. Somewhat analogous conclusions, but much less rigorous in form, were drawn by

[2] Émile P. Levasseur, *La population française*, I, 377.
[3] Otto Ammon, *Die natürliche Auslese beim Menschen*, Jena, 1893.

Livi and Guida on the basis of their analysis of the anthropological data of Italian conscripts.[4]

One can say, in general, that the individuals in our large cities do not have as strong physical constitutions as those in our rural districts, and that it is desirable for city populations to be renewed constantly by migrants from outside. Lagneau studied the comparative number surviving at various ages in France as a whole and in the Department of the Seine, in which Paris is located. The table above indicates that the mortality of individuals born in Paris is much greater than the average for France as a whole. Of every 10,000 infants born, only 3,567 survive to the ages of 20 to 30 in the Department of the Seine (Paris) as compared to 5,432 for France as a whole.

Lagneau estimated that if there were no migration into the Department of the Seine its population would be cut practically in half each generation. It would take only eighteen generations, or about five and a half centuries, to exhaust it entirely.[5]

MORTALITY

In order to make plain the difference in birth and death rates between city and non-city populations, we present side by side the average rates for the principal French cities (except Paris) and for the respective departments. One will notice that there is no very large or consistent difference between the cities and their departments in regard to birth rates, but that the cities always have higher death rates.[6]

INFANT MORTALITY

Infant mortality is very high in the cities.[7] Deaths of children under five years of age constitute 288.2 of every 1,000 deaths in Paris, and 198

[4] This research has been analyzed very carefully by Dr. Chervin in the *Journal de la société de statistique de Paris,* November, 1896.

[5] A group of 10,000 natives of the Seine would have only 5,996 descendants, these only 3,595, and so forth: 2,155, 1,292, 774, 464, 278, 166, 59, 35, 21, 12, 7, 4, 2, 1 (in the eighteenth generation). See Gustave S. Lagneau, *Étude de statistique anthropologique sur la population parisienne,* Paris, 1869.

[6] From 1881 to 1890 the death rate in Sweden was 22.6 per 1,000 in Stockholm, 18.7 in the other cities, and 16.3 in the country.

[7] Infant mortality in Sweden was as follows in the different periods:

DEATHS UNDER ONE YEAR PER 1,000 BIRTHS, SWEDEN, 1816–1890

PERIODS	STOCKHOLM	OTHER CITIES	COUNTRY
1816–1840	307.5	192.0	162.7
1841–1850	311.7	182.3	146.2
1851–1860	318.5	180.7	137.5
1861–1870	266.7	169.4	130.6
1871–1880	274.5	166.2	118.8
1881–1890	193.6	131.4	102.0

of every 1,000 deaths in France as a whole. The proportion differs a great deal in the various quarters of the city according to whether they are rich or poor.

The statistics of the United Kingdom effectively demonstrate the frequency of infant mortality in urban populations by comparing the average number surviving at various ages in three rural counties (Hertfordshire, Wiltshire, and Dorsetshire), five industrial counties (Staffordshire, Leicestershire, Lancastershire, West-Riding, and Durham), and three large cities (Preston, Leicester, and Blackburn).

Birth and Death Rates per 1,000 Population of the Principal Cities of France and of the Respective Departments, 1890–1891 *

City	Birth Rate	Death Rate	Department	Birth Rate	Death Rate
Lyon	19.2	20.2	Rhône	20.8	20.
Marseilles	27.7	26.8	Bouches-du-Rhône	27.9	26.3
Bordeaux	21.3	21.3	Gironde	20.	19.
Lille	30.7	23.9	Nord	30.4	20.6
Roubaix	31.7	20.	du		
Toulouse	18.6	22.	Haute-Garonne	18.7	20.
Nantes	21.6	21.6	Loire-Inférieure	24.8	18.
Saint-Étienne	27.1	24.3	Loire	24.9	20.
Le Havre	32.4	27.3	Seine-Inférieure	30.4	26.3
Rouen	26.4	29.1	du		
Reims	28.5	23.6	Marne	23.	20.9
Nice	25.9	24.8	Alpes-Maritimes	28.2	26.
Nancy	22.9	21.9	Meurthe-et-Moselle	23.1	20.4
Amiens	24.	22.1	Somme	23.1	22.

* Editors' Note.—The table gives crude rates; as was explained in the text the crude rates give fictitious values favorable to the cities.

Number of Infants per 100,000 Births Surviving at Various Ages in England

Age	Rural Counties	Industrial Counties	Cities
Birth	100,000	100,000	100,000
Three months	94,820	92,051	90,874
Six months	93,069	88,574	85,574
Twelve months	90,285	83,081	78,197

The infant population (0 to 1 year) diminished 22 per cent in the cities, 17 per cent in the industrial counties, and only 10 per cent in the rural counties.

In exceptional cases, because of the absence of proper hygiene, the mortality of children is greater in the rural districts than in the cities.[8] In Italy the mortality of children under 5 years of age was 35.8 and 37.6 per cent in the principal seats of the provinces (1893–1894), while it did not descend below 44.80 per cent in the entire kingdom (1889–1892).

STILLBIRTH RATE

Stillbirth mortality as well as infant mortality is greater in the cities than in the country. In Belgium the provinces of Brabant and Hainaut, which have large urban populations, have greater stillbirth rates than the others. In Sweden in the period from 1881 to 1890 the stillbirth rate per 100 births was 2.54 in the rural communities, 3.0 in the cities, and 3.3 in Stockholm. In France in the period from 1865 to 1880 it was 5.2 in the urban population and 3.9 in the rural. In Paris from 1883 to 1892 it was 7.0.

In general, the proportion of stillbirths is greater in the middle *arrondissements* of Paris (8 per 100 births) than it is in the surrounding ones (6.2 per 100), where the population has, on the whole, a more stable character. In Switzerland, Prussia, Holland, and some other countries there are also higher stillbirth rates in the cities than in the country.[9]

[8] *Bolletino demographico dei comuni capoluoghi di provincia,* 1893. This document correctly adds that the infant mortality rate in the country is increased by the number of children born in the city but dying elsewhere. *Un certo numero di bambini ati nelle cita sono collocati a bolia in campagna, e se durante il periodo di allettamento sono compresi nella statistica del Comune nel quale avvenne la morte.*

[9] In Switzerland in 1892 the number of stillbirths per 1,000 births was 40 in the fifteen principal cities and 35 in the rest of the country.

CHAPTER XX

RURAL-URBAN INTELLIGENCE, MENTAL HEALTH, PSYCHOLOGICAL PROCESSES, AND PREDOMINANT ATTITUDES

A. RURAL-URBAN INTELLIGENCE

In this chapter the formal aspects of the most important mental traits are studied, such as intelligence, mental diseases, character of perceptions, representations, associations, reproductive imagination, emotions, experience, and attitudes of rural and of urban groups. The psycho-social differences between rural-urban populations, according to the content of the moral, religious, aesthetic, and family distinctions, are the components of rural-urban culture and were examined in Volume II of this work.

From the time that populations first became conscious of rural-urban distinctions, or the separation of the agricultural and the nonagricultural groups, there has been considerable discussion of their relative intelligence, and particularly during the last few decades because of the development of various so-called measures of intelligence. The general belief has been that the more intelligent have migrated to the cities.[1] Many authors have attempted to prove this on several grounds and have maintained that most men of genius and most leaders were born in cities; that bright persons born in the country migrate to the cities, where there is greater opportunity for them and greater appreciation of their ability, and where they bear their children; that the statistics of the feeble-minded show the greater incidence of the dull in the country; that studies of school achievement reveal the presence in the cities of the bright pupils; and finally, that psychological

[1] This controversy is very old. See chapter i of this work where the opinions of various writers of the past are given. See also Jean Guillou, *Étude d'économie rurale et sociale: L'émigration des campagnes vers les villes et ses conséquences économiques et sociales,* Paris, 1905, pp. 299 ff., for the claim that the most intelligent migrate, and Georges Michel in *L'économiste français,* May 30, 1896, for the opposite contention. See also Robert Vaughan, *The Age of Great Cities: or, Modern Civilization Viewed in Its Relation to Intelligence, Morals, and Religion,* London, 1843, pp. 146–153 ff.

tests and school achievement reveal higher intelligence among the urbanites, in general, than among country people. The principal lines of proof of this argument are examined in the subsequent analysis.

Intelligence, as such, is the combination of mental factors which the individual is supposed to use in achieving some aim or goal in life, and the ability to adjust himself adequately to a new situation.[2] Students disagree upon the exact proportions of innate and environmental factors in intelligence, but in all probability it is a combination of the two—certain innate abilities tempered by both natural and social environments.[3]

The first problem covers rural-urban intelligence tests and school achievement. For purposes of analysis these psychological tests may be divided into two main classes: those dividing the groups according to the occupation of the parent and those separating communities by size and comparing the rural with the urban. The latter will hereafter be called "blanket" comparisons, because they differentiate neither the occupational groups nor the varied types of rural and urban people living within the same community.

I. MEASURES OF COMPARATIVE INTELLIGENCE

1. *"Blanket" intelligence tests.*—The studies[4] include large enough samples of the populations of several countries and of various nationalities and races to be statistically valid and cannot be criticized on the ground of poor sampling. Also, they are standardized according to age, grade, nationality, and types of farming. Many different types of tests were used: those measuring pure reaction of a nerve and muscle as well as those measuring pure vocabulary. A summary of the results suggests that the greater proportion of the tests place rural children lower in intelligence than urban children. According to the conclusions of the investigators this difference is due primarily to greater innate intelligence on the part of the urban children. However, in regard to these data and the conclusions based on them certain criticisms and exceptions may be raised. First, the classification of schools

[2] Pitirim A. Sorokin, *Social Mobility,* London and New York, 1927, p. 280.

[3] See the work of Myra Shimberg in the following readings.

[4] Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology,* New York, 1929, pp. 235–240. A summary of the more important tests and educational measurements is given in a table in the readings to this chapter.

as rural and urban is not a clear demarcation, because each separate study uses a different classification, so that what is rural for one is urban for another, and vice versa. Secondly, the size of the school varies as well as the types of the population in a given area. Yet the authors of these studies attribute this variation in the independent variable, *IQ*, primarily to differences in the ruralism or urbanism of the populations studied. Thirdly, there is an urban bias in the tests: they measure the direct experience more within the scope of the urban children; they base the tests more upon such indirect experiences as reading, school training, and secondhand experience, which is greater among urban children; and they use such tools as pencils, paper, words, playing cards, and so on, with which the urban children are more adept and familiar. These three factors, which give an undue advantage to urban children, tend to reduce the rural ratings and increase the urban ones on these tests without regard to innate intelligence. The comparison is somewhat meaningless, because an unselected group is compared with a mixture of several groups, some of which are undoubtedly selected. The blanket rural-urban analysis is a comparison of the rural group with the lower classes in cities plus a group selected from both country and city, the upper classes in the cities. Many of these studies are divisions of organic wholes of society into noncomparable groups. As Galpin has suggested in his studies of the urban community, the agricultural village is an organic whole with the surrounding community.[5] In so far as such a social organization exists, the country people are compared with their own natural leaders, who are, in most cases, the children of country people and the fathers of future country people.

These blanket comparisons do not take into consideration the enormous differences in educational and cultural opportunities between agriculturists and city people, especially members of the upper classes. For comparative *IQ*s to be significant they must concern social groups where the educational and cultural conditions are at least somewhat similar. It is evident that the conditions in the urban middle and upper classes and among the farmers are strikingly different.

Finally, we must decide that unless these major criticisms in-

[5] Charles J. Galpin, *Rural Social Problems*, New York, 1924, chaps. v and xv.

validate the data and the conclusions drawn from the studies in the table following in the readings, a firm foundation has been laid for the theory of a "country bled white by the migration of the brighter to the cities."

2. *Tests of occupational groups.*—These studies include measurements of more than 150,000 children and adults from large samples in the United States, England, Japan, and the Isle of Wight. Let us analyze them for similarities. Farmers or their children are ranked as skilled and semiskilled laborers in a great majority of the investigations. The studies of Book, Colvin, Haggerty, and Nash in which farmers ranked lower than the group of common laborers are all based on high school students. Farmers may be divided into two main groups, the class of entrepreneurs or managers and the labor or employe class. In England and the Isle of Wight this division is clearly marked.[6] The class of entrepreneurs averages considerably higher in test scores than the labor class. The army tests were claimed to underrate considerably the relative ability of the farm class.[7] Nevertheless, it does not, by any means, rank as low in test scores as the lowest common labor groups in the cities.

Tests of high school groups, especially of high school seniors, or of educational institutions above the grades, underrate the ability of farmers because of the social selection that affects higher education. Book in his study of high school students in Indiana showed that while the farmers, composing only 33 per cent of the population of the state, produced 37 per cent of the high school seniors, the laborers, composing 24 per cent of the population of the state, furnished only 9 per cent of the seniors. Haggerty and Nash found that farm children in New York composed 46 per cent of the grades and 34 per cent of the high school group, a decline of 25 per cent, and that laborers dropped from 11 to less than 4 per cent, a decline of about 66 per cent in proportion.

These studies have established as inadequate the comparisons of occupations based on analyses of school children more advanced than the grade school because of differences in social selec-

[6] Arthur W. Ashby and J. Morgan Jones, "The Social Origin of Farmers in Wales," *English Sociological Review*, 1924. Only 11 per cent of the rent-paying or operating farmers were sons of farm laborers, whereas 75 per cent were sons of "capital farmers."

[7] The Memoirs of the National Academy of Sciences, XV, 830 (1921).

tion.[8] This principle invalidates many of the occupational comparisons made in this as well as in many other fields. Moreover, these comparisons do not meet the criticism that the size and efficiency of the schools vary as does the composition of the population. Neither do they answer the objection that differences in the bias of the tests, the use of work symbols, and general differences in cultural behavior are limiting factors in ability to answer the tests, and that these tests are always made by urban people.

The final conclusion is that if these tests measured native ability, instead of school environment, differences in cultural behavior, and use of common word symbols, we would have a real measure of the intelligence of farmers: about that of the upper groups of semiskilled labor. If this fact were settled we could, of course, state that net migrants from agriculture who rise above semiskilled labor are lowering the average of the farm class by leaving, and those who end up in common labor are improving it. Migrants of the ability of the semiskilled laborers would have no effect of a qualitative kind. But the probable truth of the matter is that the tests do measure some differences in school environment and in the use of word symbols. The net result, therefore, is the lowering of the real rating of farmers. This, of course, lowers the chance that migrations are harmful to the rural areas.

In addition to these occupational tests discussed there is another group presenting data of tests taken by college students preparing for different occupations. Some of the conclusions are given in the readings. The only characteristic conclusion common to these studies is that colleges of agriculture have ratings below the medians of the universities at large. Even if we grant that these data are valid and that there are real native differences, they do not prove anything concerning the native ability of farmers as a class, because many of the students in nonagricultural schools are sons of farmers, many of those in colleges of agriculture are not sons of farmers, and many never return to the farm, either as bona fide

[8] For further data on this conclusion see William H. Pyle, *The Nature and Development of the Learning Capacity,* Educational Psychology Monographs, 1925, No. 25; Leonard P. Ayres, *The Public Schools of Springfield, Illinois; Educational Section of the Springfield Survey,* New York, 1914, p. 46; George S. Counts, *The Selective Character of American Secondary Education,* The University of Chicago Press, 1922, pp. 48 ff., 78 ff.; Sterling G. Brinkley, "Selection in Secondary Education in America and in China," *Peabody Journal of Education,* III, 214–222 (January, 1926); and Edward L. Thorndike, "Changes in the Quality of Pupils Entering High School," *School Review,* XXX, 355–359 (May, 1922).

farmers or as agricultural leaders. Furthermore, we know nothing of the relative types selected by colleges from the different groups. The same criticisms of cultural differences and of bias in the tests also apply to these studies. While these are not conclusive data, they are submitted as a part of that large body of material so often cited as proof that the brighter farm children have migrated or are migrating from the farm.

3. *School achievement.*—A number of such studies are summarized in the readings. Briefly, all these investigators agree that the rate of retardation is higher in the rural schools and the rate of acceleration is higher in the urban. The same relationships are noticed in these studies as in the other comparisons; the village schools have a better record than the open-country schools, whereas cities and towns excel the villages. The only exception, the data presented by G. W. Gayler for Illinois, finds actual retardation higher in the graded schools, but excessive retardation higher in the ungraded rural schools.

Whether these studies prove anything concerning comparative intelligence is doubtful. All the criticisms directed against the other comparisons of intelligence apply with even greater force to these studies. In addition, we have further criticisms of this type of comparison: country children are kept away from school more than urban children because of the weather, the need of help at home during the busy seasons, and other reasons; country schools have shorter terms; rural teaching equipment and teaching methods are poorer; the better teachers, as a rule, are to be found in town; country people are often less interested in book learning unless it has an extremely practical appeal. Considering these factors, we conclude that these data may only be accepted as highly questionable proof of the differences in the native ability of rural and urban people.

4. *Length of time in school and mobility up the educational ladder.*—A study of the important data on this phase of the problem seems to indicate the following conclusions:[9] Farm children progress less rapidly through the elementary schools than city children. (The comparisons are based upon children in different schools rather than upon the two types of children in the same school.) This is attributed to the fact that the rural schools are

[9] A summary of many of the important studies is given in the readings. See also Sorokin and Zimmerman, *op. cit.*, pp. 244–247.

more primitive than the urban schools, which have improved educational methods and individual instruction.[10]

Farm children seem to stay in school longer than urban children, and in their *IQ*s they make more progress because they seem to like school better than city children and go voluntarily. Farmers in the United States seem to rank with the upper classes in the total population with regard to the proportion of the high school students contributed. The laboring classes of the cities have a smaller proportion of high school pupils in comparison with the number of children they produce in the total population. The same conclusion holds true for high school seniors. In Europe, where the educational advantages of the farmers and peasants are limited, it is not certain that the rural people furnish a higher proportion of students above the grade schools than they do of the total population, but the evidence seems to show that peasant children are more capable of graduating than the children of laborers. In the United States the farm children seem to move more rapidly through the colleges and universities than the children of laborers, and, in some cases, than the average of all urban children. Without discussing these facts further we conclude that the data in this field seem to indicate that the psychological tests have somewhat underrated the relative ability of rural children.

5. *Achievement in life and in school subjects.*—A number of theories have been suggested as to the types of intelligence more prevalent in the city than in the country. The earlier theories were based upon a study of the origin of great men and leaders classified according to types. The fact that rural children seem to rise to eminence in certain channels more than in others has been taken to mean the selection by the city of particular types of minds with the result that types of intelligence in the city and the country may vary as well as the general ability of the two groups.[11] However, many of these studies give conflicting data. Assuming that different types of personality are reflected in the

[10] See John M. Foote, "A Comparative Study of Instruction in Consolidated and One-Teacher Schools," *Journal of Rural Education,* II, 337–351 (April, 1923); Myra E. Shimberg, *An Investigation into the Validity of Norms with Special Reference to Urban and Rural Groups,* Archives of Psychology, No. 104, 1929, p. 39.

[11] See Ellsworth Huntington, *The Pulse of Progress, Including a Sketch of Jewish History,* New York, 1926, chap. iv; Fritz Giese, "Die öffentliche Persönlichkeit," Supplement No. 44 to the *Zeitschrift für angewandte Psychologie,* 1928, p. 72; Roy H. Holmes, "A Study in the Origins of Distinguished Living Americans," *American Journal of Sociology,* XXXIV, 670–686 (January, 1929); Ernest R. Groves, "Psychic Causes

achievements and choice of different school subjects, we are able by examining the data to test the theory. Basing the data upon studies of several hundred thousand children, we are enabled to reach the conclusion that either achievement in various school subjects does not register the specific mental abilities of the two populations, or there has been no differential selection of innate types of personality by the city.[12]

6. *The origin of distinguished persons.*—This type of comparison has been especially popular during the present century. In the readings the conclusions of a number of such studies are presented in tabular form and compared. These investigations include most of the origins of the intelligentsia of England, France, Germany, and America from the year 1000 A. D. In addition, there are some data for other European countries, including Russia and Italy, a study of all the distinguished women of history, and a study of distinguished Germans by Fritz Giese in the readings in this chapter.

The data may be divided into two classes: blanket rural-urban comparisons and those differentiating such social classes as farmers, laborers, artisans, and upper classes.

The blanket comparisons suggest several conclusions. First, the urban populations appear to produce eminent men to a much greater extent than the rural populations. These data, however, if standardized according to age or to occupational groups, reduce the differences considerably and result, according to Giese's study, in a lower rate for the large cities as compared with the open country. Secondly, rural populations furnish a greater number of farm leaders than do urban populations. There is no absolute correlation between urbanization and eminence in the population. Small towns often excel large cities, especially when they are located near the large cities. This trend was noted before the development of the present residential suburbs, which are filled with commuters to the larger cities.

of Rural Migration," *American Journal of Sociology,* XXI, 623–627 (March, 1916); Hornell N. Hart, *Selective Migration as a Factor in Child Welfare in the United States, with Special Reference to Iowa,* University of Iowa Studies in Child Welfare, Vol. I, No. 7, pp. 56 ff. (1921); Fritz Maas, "Ueber die Herkunftsbedingungen der geistigen Führer," *Archiv für Socialwissenschaft und Sozialpolitik,* XLI, 141–186 (1915); J. Nothaas, "Sozialer Auf- und Abstieg im deutschen Volke," *Kölner Viertejahrshefte für Soziologie,* IX, 61–81 (1931).

[12] See the summary in the reading and Sorokin and Zimmerman, *op. cit.,* pp. 248–251.

From the comparisons based upon the occupation of the parent the following conclusions are deduced: Among farmers there are not as many eminent persons, relatively, as among the upper classes of the nobility, big business, and professional groups. On the other hand, farmers have a greater number of distinguished persons than have common and semiskilled laborers in every case. Generally, they have better records than the skilled laborers. In the proportion of eminent men, farmers rank considerably higher than in the occupational or psychological tests.

These studies discredit considerably conclusions based on the psychological tests of rural and urban peoples, since they furnish a great deal of evidence that these tests underrate the actual ability of rural people. The proportion of distinguished men among farmers has always been constant, if not actually increasing, while among laborers it appears to be decreasing. This fact seems to indicate that, if these studies are representative, social selection is draining the ranks of laborers more than those of the farmers, who have been able to reproduce and maintain their native ability to a greater extent than most of the other manual laboring classes. Farmers' sons seem to rise to eminence through channels relatively different from those through which men in other social groups rise. It is easier for farmers' sons to become distinguished in some channels than it is in others. Some of these are the church and the school; political leadership in democracies; possibly labor and radical leadership. It is more difficult for farmers to climb in the business world, in the military field, and in political channels in monarchies.[13]

Four studies of exceptionally bright children give data as to their origin.[14] The Almacks studied the brightest children in the six grades of the schools in the city of Eugene, Oregon, in 1920. The farm furnished 13 of the 50 gifted children, common labor 1, the skilled trades 22, the merchant class 7, and the professions 8. Farmers had a considerably better record than common and skilled laborers in this town study. Lewis M. Terman included

[13] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 254–255.

[14] John C. and James L. Almack, "Gifted Pupils in the High School," *School and Society,* XIV, 227–228 (September, 1921); Lewis M. Terman, *Genetic Studies of Genius,* Stanford University Press, 1926, Vol. I; Elmer E. Jones, "A Study of Some Exceptional High School Pupils in Illinois," *The Illinois School Survey,* Springfield, 1917, pp. 238–276; and Charles Deich and Elmer E. Jones, *A Study of Distinguished High-School Pupils in Iowa,* United States Bureau of Education Bulletin No. 46, 1923.

in his studies the birthplaces of the parents and grandparents of the children of genius of California. The grandparents were rural born in 28.8 per cent of the cases and the parents in 26.6 per cent. The skilled labor group, including farmers, furnished 11.8 per cent, the semiskilled, 6.6 per cent, and common labor, 0.13 per cent. This group of superior children were found mainly in city high schools of California. Elmer E. Jones made a study of the 116 most distinguished high school pupils of Illinois in 1916. Deich and Jones also made a similar investigation of distinguished seniors in Iowa high schools in 1921. All these studies add strength to the conclusions drawn in the section devoted to the rural or urban origin of distinguished men. Further weight is added to the conclusion that the wage-earning classes in towns seem to be drained considerably drier of leadership than the peasant class.

II. THE MEASURE OF VARIABILITY OF RURAL AND URBAN INTELLIGENCE

In the previous discussion we have approached comparisons of intelligence entirely from the viewpoint of means and averages. There are other measures of intelligence of great importance—measures of variability or the closeness of the distributions about the means of the various rural and urban groups. We have already shown the great variability of urban populations with regard to physical and vital traits. When rural populations are considered as one occupational group with one mode, and urban populations are considered as a number of such groups with many modes, it is readily apparent that the urban are more variable. This is evidence of the theory that the extremes are found in the cities and the mean or average types are in the country. Some studies of intelligence give data on variability. Haggerty and Nash in a study of school children in New York conclude that in the common school groups, which are most representative, the agricultural group is less variable than any of the social ones found in urban life. Van Wagenen in his study drew a similar conclusion concerning Minnesota students. A composite measure of variability of the whole urban group would of course emphasize this rural-urban difference in variability. In the high school groups the classes of unskilled and skilled laborers and the professionals are less variable than farmers. The variability of the farm children in high school appears to be greater than that of

the common school children whose fathers are farmers. This study covered a rural area settled by a comparatively homogeneous group, whereas the cities are fairly representative of the heterogeneous manufacturing populations of the northeastern part of the United States.

A summary of the other valuable data on variations in intelligence suggests several conclusions.[15] It appears that local homogeneous rural communities have an index of variation lower than the corresponding urban groups in all major occupations. Large rural areas containing different nationalities and environmental types have an index of variation larger than the lowest urban groups and smaller than the upper groups on the average. On the whole city groups also exceed rural in variations when the cities are approached as units without regard to occupation. The conclusion is entirely corroborated by an enormous difference in the quota of great men from the upper and the lower classes. On the whole, the variations in psychological data and in intelligence show that there is a greater range in the cities than in the rural districts. The urban districts have a less capable proletariat and more geniuses.

B. RURAL-URBAN MENTAL HEALTH

I. MENTAL DISEASE AS RELATED TO INTELLIGENCE

The data on the distribution and incidence of mental disease in rural and urban districts, especially feeble-mindedness, has been used as a popular argument that the intelligence of rural people is declining or is, at least, inferior to that of the urban.

Statistics on mental disease have been compiled for several years by various governmental organizations, for such diseases as a rule become matters of public record, either because the patients are objects of public support or because they are incarcerated in governmental or public hospitals.

The three main classes of mental diseases—insanity, feeble-mindedness, and epilepsy—may be subdivided into many others,

[15] See the data in Sorokin and Zimmerman, *op. cit.*, pp. 256 ff. Variations in mental disease and in attitudes are as great as variations in intelligence in the cities. Several proofs of this statement are given in the following pages. We make this claim of greater variations in intelligence in the cities in spite of the opposite suggestion in the 1925–1927 study of mental deficiency in England and Wales, which is included in the readings.

according to the nature of the symptoms, the causes, or the seriousness of the disease.

A summary of the conclusions, reached from a study of the data, may be formulated as follows:

1. *Insanity.*—There appears to be a permanent and high correlation between urbanization and all the diseases known as insanity, in so far as patients in mental hospitals are representative of the various groups. This correlation appears valid for all ages and for both sexes; it increases with the size of the community and with the increase of urbanization. When this correlation is tested in various types of insanity, those cases correlated with alcoholism and syphilis have the most rapid increase with urbanization. Insanity associated with epilepsy and mental deficiency reveals the slowest rate of increase with urbanization. As a matter of fact, the correlation is often negative when insanity is connected with mental deficiency. Separation of the sexes according to types of insanity does not invalidate these rural-urban correlations based upon types of disease.

2. *Feeble-mindedness.*—The data concerning feeble-mindedness in institutions show at first sight a correlation with urbanization. Upon closer examination, however, this correlation is not general and it is even reversed in areas with the best administrative systems. Furthermore, the sexes often give opposite data in the same area. It is believed that a greater proportion of the feeble-minded in urban districts are in institutions. The census data for the United States give some evidence that morons in rural districts are more liable to be kept out of institutions. Crude comparisons of rural and urban data on idiots and imbeciles in institutions show still greater incidence in urban districts. It is probable that when institutional and non-institutional imbeciles are considered, there is not much difference between the city and the country.

An analysis of the most important investigations of feeble-mindedness in the non-institutional populations indicates some evidence to prove that the non-institutional morons are more prevalent in rural districts. However, students of this disease are at variance as to what constitutes feeble-mindedness. The cities in sending more of the morons to the institutions naturally decrease the proportion in the non-institutional population. Furthermore,

the data of the studies are not standardized according to age and sex groups—an extremely important procedure in this case, because we do not know exactly whether the total—institutional and non-institutional—feeble-mindedness prevails in cities or in the country, or whether the shares are the same in both groups.

3. *Epilepsy.*—There are more cases of epilepsy in cities if the institutional population is a fair index, but the census officials doubt that it is representative.

II. THE DATA

1. *The census data.*—In 1910 and 1922 the rates of first admissions to mental hospitals (public and private) in the United States indicate a strong correlation between urbanization and total insanity.[16] The 1910 census of mental disease breaks up the population into various types of groups and reveals the fact that the correlation between urbanization and crude rates of admissions to mental hospitals for the insane appears general and constant.[17]

Both these census volumes give data as to the comparative incidence of insanity (admissions to mental hospitals) among males and females and urban and rural populations. Moreover, the 1923 census gives data as to age groups and sex that is in substantial agreement with the data of 1910.

These data strengthen the correlation between urbanization and admissions to mental hospitals still further because they are standardized according to the separate sex and age groups. In accordance with the census data we are able to agree that "these rates clearly show the fallacy of the oft-quoted legend that a high rate of insanity is found among women in the rural districts."

The 1922 census gives complete data as to types and disease according to sex and environment. Twenty-five different types of psychoses are given in this volume. If a comparison is made of standardized data relating to both the sexes and to urban and rural populations, it appears that all types of mental psychoses are

[16] United States Bureau of the Census, *Patients in Hospitals for Mental Disease, 1923,* p. 14; Sorokin and Zimmerman, *op. cit.,* pp. 264 ff. All data given in the latter work are omitted here.

[17] United States Bureau of the Census, *Insane and Feeble-minded in Institutions, 1910,* Tables 50 and 57. Similar data for 1922 without reference to country of birth or color are given on page 39 of the Census of 1923.

more prevalent in urban districts. Huntington's chorea is an exception, but it is unimportant, since it caused insanity in only one out of a million of the population in that year.[18]

The two outstanding types of insanity that increase in urban districts are alcoholism and general paralysis, which is nearly always the result of syphilis. All other types increase equally with urbanization except those associated with epilepsy and mental deficiency, as is shown by other recent studies.[19]

A comparison of urban and rural males and females in 1922 brings out the following points: General paralysis increases most rapidly among city men. Epilepsy has the same average among the males in both groups (1.9), but a lower one in the rural districts among females (1.3 to 1.1). Mental deficiency has a higher rate among rural males but lower among rural females. These differences are so minor, however, except in general paralysis, that it is impossible to draw definite conclusions from them.

Data on feeble-mindedness and epilepsy are given in a separate report of 1923.[20] There is some correlation between urbanization and the proportion of the population classed as feeble-minded in institutions. The census says,

> These rates, while constituting a true comparison of first admissions to institutions for the feeble-minded, cannot be taken as indicating the relative prevalence of feeble-mindedness in urban and rural districts. Social adjustment in cities is much more difficult than in rural districts. It is probable, therefore, that of the total feeble-minded in in the community, the proportion sent to institutions is larger in cities than in rural districts (page 56).

[18] *Ibid., 1923,* pp. 42, 49. The detailed table on page 49 is omitted here because of its availability.

[19] See Horatio M. Pollock and Edith M. Furbush, "Mental Diseases in Twelve States, 1919," *Mental Hygiene,* V, 353 ff. (April, 1921); Edith M. Furbush, "Social Facts Relative to Patients with Mental Diseases," *Mental Hygiene,* V, 587 ff. (July, 1921); Horatio M. Pollock and W. J. Nolan, "Mental Disease in Cities, Villages, and Rural Districts of New York State, 1915, 1920," *State Hospital Quarterly,* VII, 38–65 (1921); Horatio M. Pollock, "Alcoholic Psychoses before and after Prohibition," *Mental Hygiene,* VI, 815–825 (October, 1922); Horatio M. Pollock and Edith M. Furbush, "Prohibition and Alcoholic Mental Disease," *Mental Hygiene,* VIII, 548 ff. (April, 1924); Horatio M. Pollock, "Frequency of Dementia Praecox in Relation to Sex, Age, Environment, Nativity, and Race," *Mental Hygiene,* X, 596 ff. (July, 1926); Stephen S. Visher, *Indiana County Contrasts in Criminality and Insanity,* Indiana Bulletin of Charities and Correction, No. 164, November, 1928, pp. 446–450; W. A. White, *The Social Significance of Mental Disease,* Archives of Neurology and Psychiatry, November, 1929, pp. 873–900.

[20] United States Bureau of the Census, *Feeble-minded and Epileptics in Institutions, 1923,* 1926.

If a careful examination is made of the table in the reference it will be seen that the rates in rural districts are higher in New England (10.8 to 7.2), because of the much higher rates among females from rural districts (15.6 to 6.5). Furthermore, the rate among females is higher in rural districts in the Middle Atlantic division and the rate among males is higher in the West South Central. If an examination is made of each state it will be seen that the correlation between urbanization and feeble-mindedness in institutions is by no means general. In nine of the states the total rates of first admissions from rural districts are greater; in four the rates of admissions of either sex are greater for the rural districts; and in one state there is an equal rate for the entire state. In eleven states there is a higher rural rate among males and in eight states among females. In one other state the urban and rural rates among females are equal. The reader, however, is cautioned that this whole table is based on only 7,009 cases, so that the rates for separate states may fluctuate considerably.[21]

On the basis of further data, after making all the necessary allowances, we may draw the following additional conclusions: The properly weighted census data reveal the fact that idiots are more prevalent in urban districts and imbeciles are found about equally in the city and in the country. In the data on morons we must determine the rural-urban proportion (a) in institutions, (b) out of institutions, and (c) the total number of institutional and non-institutional morons. The urban share of the institutional morons is much higher, but, because morons are more frequently committed to institutions in the cities, the cities may have an equal or even a lower proportion of the non-institutional morons than the country population. When both groups—the institutional and non-institutional—are taken, the proportion in the city and that in the country are unknown; it may be about the same in the urban and rural populations. The conclusions based on the census data and other relevant studies seem most probable.[22]

[21] *Ibid.*, pp. 56–57.

[22] Lewis M. Terman, Virgil Dickson, and Lowry Howard, "Backward and Feeble-minded Children in the Public Schools of 'X' County, California," *Surveys in Mental Deviation in Prisons, Public Schools, and Orphanages in California,* California State Board of Charities and Correction, Sacramento, 1918; Walter L. Treadway and Emma O. Lundberg, *Mental Defect in a Rural County,* United States Department of Labor, Children's Bureau Publication No. 48, 1919; Taliaferro Clark, "Mental Examination of School Children," *Public Health Reports,* Vol. XXXI, Part III, pp. 2265–2271 (1916); Rudolf Pintner and Donald G. Paterson, "A Psychological Basis for the Diagnosis of

The final conclusion on the incidence of feeble-mindedness in the non-institutional population is that there is some evidence that it is more prevalent among the rural than the urban population in the United States. However, the importance of feeble-mindedness in the whole category of disease has been somewhat overestimated because of the elasticity of the usual definitions given to feeble-mindedness. Furthermore, the town-country differences in feeble-mindedness are not so great as they are often presented; to arrive at a true estimate we must set the greater incidence in the rural non-institutional population against the greater incidence in the urban institutional population.

The census of feeble-minded during 1922 gives a separate analysis of epileptics. Based upon first admissions in 1,372 cases the rural rate of 1922 was 0.9, as compared with the urban rate of 1.7 per 100,000. This rural-urban difference existed in both sexes and in all states except four, Illinois, Massachusetts, North Carolina, and Ohio. The census report questions the validity of this rural-urban comparison by stating that the "difference in these rates does not necessarily imply that epilepsy is more prevalent in urban than in rural districts, as it is likely that a larger proportion of epileptics in urban districts reach institutions" (page 80).

The important conclusion that may be drawn at this point is that epilepsy, whether more frequent in urban or in rural districts, is a minor type of mental disease.

2. *Statistics on mental diseases among recruits.*—In addition to the previous data on the rural and urban incidence of mental disease in the United States, there are some important conclusions

Feeble-mindedness," *Journal of the American Institute of Criminal Law and Criminology,* VII, 32–55 (May, 1916); Pearce Bailey and Roy Haber, "Mental Deficiency," *Mental Hygiene,* IV, 564–596 (July, 1920); Annual Report of the United States Public Health Service, 1916, pp. 61 ff.; C. Macfie Campbell, "The Subnormal Child—a Survey of the School Population in the Locust Point District of Baltimore," *Mental Hygiene,* I, 96–117 (January, 1917), and "A City School District and Its Subnormal Children; with a Discussion of Some Social Problems Involved and Suggestions for Constructive Work," *ibid.,* II, 232–244 (April, 1918); William C. Sandy, "Mental Deficiency in New York State," *Mental Hygiene,* IV, 380–392 (April, 1920); William F. Book, *Variations in Mental Ability and Its Distribution among the School Population of an Indiana County,* University of Indiana Extension Division Bulletin No. 4, 1918, pp. 100–132; Rose G. Anderson, "Methods and Results of Mental Surveys," *Journal of Applied Psychology,* Vol. VI (March, 1922). Regarding the quarrel as to the definition of feeble-mindedness, see the original works of Binet and Simon; the study by Pintner and Paterson, cited; Frederick Kuhlmann, *Outline of Mental Deficiency for Social Workers, Teachers, and Others in Minnesota,* St. Paul, 1925; and the works of Edgar A. Doll and others.

based on the results of the examination of recruits of the Civil War of 1861–1865 and the World War of 1917–1918.

The data of Coolidge's study,[23] based on a small number of cases, are obviously inadequate and they are omitted. The conclusions of the more comprehensive data collected by J. H. Baxter on 334,321 soldiers of the Civil War, presented in the tables below, may be summarized as follows:[24] (1) Among the age groups represented, the farmers suffered from total nervous and mental disabilities at the same rate as the average for the country. Professional men and common laborers had higher rates, mercantile and skilled laborers, lower rates. (2) Agriculturists had a lower rate of disease of the brain and its membranes than the workers of any other occupation represented. (3) Farmers had more paralysis than laborers and carpenters and less than mechanics, clerks, merchants, teachers, and physicians. (4) Functional diseases of the nervous system were more prevalent among farmers than among any of the other social groups of workers. (5) Mental diseases were less prevalent among farmers than among common laborers and more prevalent than among any of the other occupational workers. If a further analysis is made according to diseases, the following conclusion may be drawn: Chorea was more prevalent among farmers than among any of the others, except among the clerks. Epilepsy was more prevalent among farmers than among other workers, except teachers. However, the differences were small. Neuralgia was less prevalent among laborers and carpenters and more prevalent among the workers of the upper urban groups. Stammering was less prevalent among laborers and carpenters and more prevalent among the workers of the upper urban groups. Alcoholism was less prevalent among farmers than any of the others. Imbecility was more prevalent among common laborers and less prevalent among farmers. Since these data must be interpreted as representative of nonexempted men, since no allowances have been made for the mentally diseased in hospitals and institutions, and since the data represent men drafted during 1863 and 1864, a period of two years with

[23] Richard H. Coolidge, *Statistical Report on the Sickness and Mortality in the Army of the United States . . . 1839–1855,* United States Senate Executive Document No. 96, 34th Congress, 1st session, pp. 628–831.

[24] See J. H. Baxter, *Medical and Anthropological Statistics of the Provost-Marshal-General's Bureau,* Washington, 1875, Vol. I, Chart 28, and *passim.* See also Vol. II, Table 20.

Number of Men Rejected for Various Nervous Ailments per 1,000 Men Examined in Various Occupations during the War of the Rebellion in the United States

Type of Disease	Farmers	Laborers	Carpenters	Mechanics	Clerks	Merchants	Teachers	Physicians
Number Examined	137,425	59,464	117,140	10,422	8,937	4,718	1,625	1,235
All disease (nervous)	12.52	14.12	10.48	11.80	9.17	11.45	12.31	18.623
I. Brain and its membranes	0.138	1.01	0.256	0.480	0.336	1.060	.....	0.810
a. Acute	0.029	0.067	0.170	0.096	.112	.....	.....	.810
b. Chronic	0.044	0.034	.....	0.192	.112	.212	.....	.....
c. Sunstroke	0.065	.....	.185	0.192	.112	.848	.....	.....
II. Paralysis	1.455	0.858	1.193	1.919	1.566	2.543	4.923	7.287
III. Functional	6.913	6.491	6.899	6.333	5.593	5.935	6.154	6.487
a. Chorea	0.247	0.168	.....	.096	.459	.....	.....	.....
b. Epilepsy	5.181	4.087	5.196	4.702	4.363	4.663	5.538	4.858
c. Neuralgia	0.233	.084	0.170	.288	.336	.636	.....	1.619
d. Stammering	1.252	2.153	1.533	1.247	.336	.636	.615	.....
IV. Mental	4,009	6.659	2.129	3.070	1.678	1.908	1.231	4.049
a. Alcoholism	0.364	1.766	0.937	1.151	1.119	1.060	.....	3.239
b. Imbecility	2.576	4.171	0.767	1.055	.477	.212	.615	.....
c. Insanity	1.048	0.723	0.426	.864	.112	.636	.615	.810
d. Solitary vice	.022							

volunteer enlistments, any conclusions must be drawn cautiously, because we do not know the total effect of these unknown factors.

The next important source in an investigation of this problem is given in the data of the medical examinations of the recruits of the United States in the last World War.[25] Omitting many details, we shall indicate at once that these determinations are greatly vitiated by a series of circumstances.[26] Without discussing their validity, we conclude from the figures that the total mental

NUMBER OF MEN REJECTED FOR DISEASES OF THE NERVOUS SYSTEM PER 1,000 EXAMINED IN VARIOUS OCCUPATIONAL GROUPS DURING THE WAR OF THE REBELLION IN THE UNITED STATES

CLASS	NUMBER EXAMINED	REJECTIONS PER 1,000
All classes	334,321	12.00
Professional	7,576	14.78
Mercantile	18,818	11.90
Skilled labor	75,761	10.36
Common labor	59,464	14.12
Farmers	137,425	12.52

disorders, the total functional nervous disorders, as well as the combined totals, are greater in each of the four rural areas than in the manufacturing area or in the area where there are commuters. However, there are some interesting limitations to this statement. The conclusion that there is greater mental disease in rural communities is due to the inclusion of mental deficiency, for the grand totals of the other mental disorders give an opposite conclusion when compared with the manufacturing district, and also an opposite one in three of the four agricultural communities as compared with the commuter district. Of the functional nervous diseases, neurosis, hysteria, and neurasthenia were lower in all the agricultural groups than in the manufacturing groups. When we eliminate the epileptics and the mental defectives from the study, because these cases are incarcerated in institutions in urban districts more often than in rural districts,

[25] Albert G. Love and Charles B. Davenport, *Physical Examination of the First Million Draft Recruits; Methods and Results,* War Department, Office of the Surgeon-General, Bulletin No. 11, March, 1919, pp. 121–138 and 344, and *Defects Found in Drafted Men,* War Department, 1920.

[26] Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 270 ff.

we conclude that all diseases of a mental or nervous nature except paralysis, apoplexy, chorea, and constitutional psychopathic states are found to be more prevalent in urban districts. The opinion that mental deficiency and epilepsy are high among rural recruits is considerably biased by the fact that a smaller proportion of them are in the institutions in the rural districts. An adequate interpretation of the incidence of these diseases among rural and urban people requires the study of both major sources of data.

3. *Investigations in other countries.*—A summary of the data for the other countries seems to yield the same conclusions as the study of the United States data. These are covered in the references and need not be repeated.[27] However, one European study of great significance, the Report of the British Mental Deficiency Committee during 1925–1927, deserves discussion in detail:

The committee found a rate of 6.71 mental defectives per 1,000 population in the urban areas and 10.49 in the rural areas. Obviously such findings are contradictory to the claims made in this *Source Book* that there is approximately an equal proportion of mental deficiency in rural and urban areas. Are there reasons that seem to invalidate the data of the British study or is there such a striking contradiction here that we must give up our claim? The answer we suggest is that there were probably certain defects in method in the British study which resulted in a higher rate of ascertainment in the rural districts and consequently made this rural-urban comparison unfair.

[27] See D. Caradog Jones, "Some Statistics Concerning Occupational Invalidity—Economic, Mental, and Moral," *Journal of the Royal Statistical Society,* LXXXIX, 694 (1926); Rosa Greenwood, Cecily M. Thompson, and Hilda M. Woods, "Heights and Weights of Patients in Mental Hospitals," *Biometrika,* XVII, 142 ff. (1925); British Sessional Papers, 1924, Vol. XIX, Table 4, p. 7; Parliamentary Papers, 1923, No. 121, and 1922, No. 172; the Special Report of the Lunacy Commission on "Alleged Increase of Insanity," British Sessional Papers, 1897, XXXVIII–XLIII, 98 ff.; Report of the British Royal Commission on the Feeble-minded, published in 1908, 6 vols.; D. H. Tupe, *Insanity Ancient and Modern,* London, 1887, pp. 95 ff.; *Annuaire statistique de la Belgique,* 1923–1924, pp. 7, 153, 154, 155; *Statistisk Årsbok för Sverige,* 1927, pp. 5, 17; Émile P. Levasseur, *La population française,* Vol. I, Paris, 1889, pp. 3 ff.; Georg von Mayr, *Statistik und Gesellschaftslehre,* Tübingen, 1917, II, 96; Great Britain, Accounts and Papers, 1924–1925, London, 1926, XXXII, 2, 53; Canada Year Book, 1926; Paul Jacoby, *Études sur la sélection dans ses rapports avec l'hérédité chez l'homme,* 2d ed., Paris, 1904. pp. 500 ff.; L. W. Weber, "Läst sich eine Zunahme der Geisteskranken feststellen?" *Archiv für Rassen- und Gesellschafts-Biologie,* VII, 704–721 (1910); Ernst Rüdin, "Über den Zusammenhang zwischen Geisteskrankheit und Kultur," *ibid.,* pp. 722–748; Horatio M. Pollock and Edith M. Furbush, "Patients with Mental Disease, . . . in Institutions in the United States, January 1, 1920," *Mental Hygiene,* V, 145 ff. (January, 1921); Sorokin and Zimmerman, *op. cit.,* pp. 273 ff.

This suggestion is an important point to consider in this study, because the higher rate of defectiveness found in the rural districts of England and Wales is the final important argument for the committee's claim of increased defectiveness during the years between the studies of 1904 and of 1925–1927.[28] The chief explanation of this increase was that selective migration to the cities had left a subnormal class in the rural areas where it had reproduced rapidly. Furthermore, improved maternity and infant welfare work had enabled greater numbers of the defectives to survive.

In support of our claim that the finding of greater mental deficiency in the rural districts of England and Wales is invalid, we present two series of arguments; one group is advanced by the committee itself and the other is our own.

The extrinsic factors invalidating the data presented by the committee were: first, greater ease of locating deficient persons in the rural districts because of the lower mobility of the population; secondly, easier recognition of defectives because of the individual nature of agricultural work; thirdly, the tendency for families with defective children to migrate to the country or to "board" them out in the country because of the greater safety there; fourthly, the generally lower death rate of mentally defective children in the country. But although the committee and the researchers attempted to allow for these extrinsic factors, we believe that the unusual and extremely high rate of mental defectives in the country, shows that not enough allowance was made.

The additional factors that we suggest as invalidating the report of the committee may be listed as follows: first, this was not merely a rural-urban comparison but one of an area of great urbanization with an area of a lesser, though still conspicuous, amount of urbanization; secondly, a high proportion of the so-called rural people were common laborers or agricultural proletariat, which, as we have shown elsewhere, is neither typically agricultural nor typically rural; and thirdly, mental test data, as we have shown above, give an unusual bias towards the city children that is not eliminated by careful observations of the tester.

[28] See the Report of the Mental Deficiency Committee, 1925–1927, London, 1929, p. 84. The work of this committee was under the direction of Dr. O. E. Lewis.

Rural area D contained half a dozen towns of 2,000 to 6,000 population in addition to numerous villages. A part of the area was a Fen district, which was a subnormal and marginal agricultural area. The proportion of laborers to farmers in area D was 339 to 100. Rural area E had only 148 laborers to each 100 farmers in the country districts, but, in addition, it contained one city of 40,000 population and numerous small cities. Rural area F was bilingual in character, an extremely significant factor in mental tests. There were only 56 laborers to 100 farmers in the country areas of this mountainous locality, but some sections of it were densely populated slate quarries and another was a deserted lead-mining country. In addition, it is to be noted that the committee's theory of the selective migration to the cities as the main factor of the increase of mental disease is in sharp contradiction to the committee's own statement that the feeble-minded can get along in the cities more easily than in agricultural work. (See the reading from the report of the committee.) If this is so, then it contradicts the committee's hypothesis of selective migration and the explanation of the increase of feeble-mindedness in England.

These considerations give us the basis for claiming that the data of this last British study are defective. We do not believe that they overthrow the data and arguments supporting the claim that there is approximately equal incidence of innate mental deficiency among city and country populations. The problem, however, is by no means settled.

III. EFFECTS OF URBANIZATION

1. *Increase of mental disease.*—The question of why mental disease increases with urbanization and in countries that are becoming more urban may be raised at this time. We suggest as significant causal factors the increased complexity of social organization associated with urbanization and the increased mobility of the individual. The characteristics of mobility and complexity have already been analyzed in chapter iv, which deals with the fundamental differences between the rural and urban worlds.[29]

This increased complexity and mobility of individuals induces greater mental strain and greater adjustment to a more intricate

[29] See K. Jaspers, *Psychopathologie générale,* Paris, 1928, pp. 578 ff.; William F. Ogburn and Ellen Winston, "The Frequency and Probability of Insanity," *American Journal of Sociology,* XXXIV, 822–831 (March, 1929).

and fluctuating order of physical and social objects. Under such pressure greater numbers of individuals break down.[30] More of them become subject to fears, delusions, manias, and psychopathic conditions; more of them take alcohol, drugs, and other stimulants, which quicken the mental abilities for the time but which lead to a more rapid breakdown later and result in mental incapacity; more come in contact with prostitutes, become infected with syphilis, and in spite of the development and use of salvarsan and curatives are driven insane; and, finally, more of the dwellers in urban communities and urban societies lose their religious and moral beliefs. The rationalistic basis upon which they establish themselves does not enable them to cope with problems that arise in the city, problems such as would never arise in a homogeneous rural community where there is an accepted and unchallenged set of mores, faiths, and religious beliefs; as a result, more of them, because they have lost their peace of mind and their equilibrium, break down and increase the mental disease rates. This does not mean that those who break down under the strain of city life are not as capable innately as those outside the city who do not break down.[31]

2. *Selective influence of the cities.*—To explain logically why one specific group in a population subjected to the wear of urban life breaks down, whereas another subject to the same conditions does not, we must consider an important factor: innate differences. These differences are greater than the variations of urban environment, especially among members of certain classes, such as college professors, for instance. It is generally recognized that innate factors are important causes of feeble-mindedness and epilepsy. But at the same time, it is logical to assume that this also holds true for other types of mental disease, although possibly not to such a great extent.

This difference in types of mental disease, as previously suggested, has been used as an argument that cities are absorbing the brighter and leaving the dull and feeble-minded. With our previous analysis in mind, how shall we answer this question? We

[30] See Sorokin and Zimmerman, *op. cit.*, chap. ii, and this *Source Book*, chaps. iii and iv.

[31] These ideas are developed in the works cited above of Weber, Rudin, and Röse; Pitirim A. Sorokin, *Social Mobility*, pp. 510–515; and Georg Buschan, "Kultur und Gehirn," *Archiv für Rassen- und Gesellschafts-Biologie*, I, 697 ff. (September-October, 1904).

suggest first, that the urban selection of those who develop various forms of insanity compensates somewhat for those feeble-minded left behind in urbanization, if such are left;[32] secondly, that there may be other compensations, such as, for instance, the greater selection of persons neither feeble-minded nor brilliant, but on the border line above feeble-mindedness, who enter the ranks of factory and unskilled labor in the cities; and thirdly, that the correlation between urbanization and total mental disease does not prove that rural communities are suffering from positive selection by the cities. Nor is the reverse necessarily true.

Finally, we do not believe that these data and other data presented in previous chapters prove any general selection of the brighter or the less capable by cities. Apparently there is greater feeble-mindedness in rural areas; this, however, is merely a likely hypothesis when all studies and the low mobility of feeble-minded persons are considered. On the other hand, we have the selection of those sufficiently bright to migrate to cities, but not sufficiently capable to bear up there under the greater mental strain. These two factors, coupled with the gross correlation between urbanization and total mental disease, suggest the hypothesis of an entirely balanced selection.

IV. SUMMARY OF CONCLUSIONS ON INTELLIGENCE AND MENTAL DISEASE

We have considered in detail the various proofs of greater or lower intelligence of the rural and urban population. Cautioning the reader that our conclusions are tentative hypotheses, and that he should draw his own by scanning the data presented, we suggest that the total data available do not indicate that the rural population on the whole has less intelligence than the urban population, at least than the great bulk of the urban population. The actual achievements and the mental tests of farmers and peasants do not show lower intelligence. The survey of mental-disease rates do not show any better adaptation of the urban person to his environment than of the rural person to his. We have studied two

[32] See Stephen S. Visher, in the Indiana Bulletin of Charities and Correction, No. 164, November, 1928, pp. 446–450. We must call particular attention to the Report of the British Mental Deficiency Committee for 1925–1927. While this study claims to find greater feeble-mindedness in the rural districts, it gives evidence that the group-work under supervision in the city factories is more fitted to the dullard than is the simplest agricultural work. See the report of the committee under the direction of Dr. O. E. Lewis, p. 70.

different types of environment and indicated conspicuous differences. We have analyzed two different types of behavior in the individual and the collective attempts of adjustment to these environments. We conclude that the mass of one population does not show greater ability on the whole than that of the other to adapt itself to these environments. The most important difference between the two is that the intelligence of the urban population shows a greater variability or contrast than that of the rural population. Cities have the greatest number of geniuses, on one hand, and the greatest number of mental defectives, on the other.

This study will have achieved its purpose when it has exposed the unreliability of the methods, the tools, and the results of most of these studies of comparative rural and urban intelligence. We are not yet ready to reach such sure and definite conclusions.

Finally, whatever may be the type of native intelligence of rural people, or the farmer or the peasant, selected by the city, the rural groups are maintaining their intelligence with much greater persistence than the lower urban classes. If there is any validity in the theories that the declines of civilizations are functionally connected with the process of draining and of exploiting the intelligence of the masses by the upper urban groups, the farmer and peasant class, less responsive to this process and more persistent in keeping its leaders, retards this decline and maintains the stability and position of society for a much longer period. In many other social phenomena, the position of the farmer and peasant class is exceptionally meritorious.

C. PREDOMINANT ATTITUDES

I. RURAL-URBAN BEHAVIOR

Why are rural-urban differences in behavior so obvious if there are no important differences discoverable in innate ability? Our answer is in terms of environment. Let us study the experience worlds of the rural and urban groups, the agricultural and non-agricultural classes, and attempt to explain these differences.

Leaving aside the selective factors that may play a part in it, how may we explain such differences from the standpoint of the environment of the agricultural and the urban labor classes?

Every man's total experience or knowledge may be divided into

direct and indirect experience: direct experience or knowledge obtained through organs of sense by direct contact with a given object, event, or human being and its actions; and indirect experience or knowledge obtained, not by face-to-face or immediate contact with objects, events, or human phenomena, but indirectly through various secondary sources of information, newspapers, books, hearsay, movies, plays, and pictures that depict, describe, or tell about these phenomena.

Each class has various degrees of completeness or adequacy, ranging from the highest degree of superficiality to a thorough knowledge, direct and indirect, of a given phenomenon. These two forms of experience are essentially different and have different cognitive value, but when other conditions are equal, direct experience is more important on the whole, more valuable, and less liable to be fallacious.

The problem is the relative amount, as a whole, of direct and indirect experience of the farmer and peasant class as compared with that of the labor classes of the urban population. Is it greater quantitatively and different qualitatively? Any answer given to this question must be only tentative. With this warning we shall set forth the most plausible hypotheses, discarding many individual variations and deviations from the rule. On the whole, the indirect experience of the urban man appears to be wider and to extend to more numerous and more varied fields; his direct experience, however, is rather narrower and extends to less numerous and less manifold phenomena. The substantiation of this hypothesis depends upon the amount of indirect experience of an urban dweller or a farmer or peasant. The indirect experience of an urbanite is wider and concerns more numerous and diversified phenomena, because his system of interaction or contact extends over a larger area than that of a peasant or farmer. An urbanite's system of interaction puts him in contact with the whole world, while a farmer's experience is limited primarily to his neighborhood and a few phenomena outside.

The proposition is further corroborated by the greater literacy and the wider diffusion of higher education within the urban population. It is reasonably certain that in all countries where the native-born population is considered, the percentage of illiteracy

is somewhat higher within the rural than within the urban population.[33]

Omitting some deviations, we found the urban illiteracy rate in the United States in 1920 to be 4.4 per cent and the rural 7.7 per cent. The native whites had a rate of 0.8 per cent in the urban districts compared with 3.8 per cent in the rural districts. The gross coefficient of correlation between urbanization and illiteracy was $r = -.490$. But when index numbers of state school systems during 1918 were held constant, the net coefficient between urbanization and illiteracy was reduced to $r = -.162$ (types of school were constant). This discloses the fact that the greater illiteracy in the rural districts was due primarily to rural life and not to the innate abilities of the two populations.[34]

The same conclusion is suggested by the fact that, on the average, the city population reads more newspapers, books, and magazines; attends more movies, theaters, lectures, exhibitions, museums; and is served by a thicker network of telephones, telegraphs, radios, and other means of diffusion of information than country people.

The following figures are representative:[35]

AVERAGE NUMBER OF NEWSPAPERS, MAGAZINES, AND BOOKS READ BY RURAL AND BY URBAN ADULTS

MATERIAL READ	CITY	TOWN	COUNTRY	NUMBER OF CASES
Newspapers	2.29	2.03	.57	837
Magazines	2.66	1.11	.20	337
Books (in six months)	9.38	1.17	.23	314

[33] Statistical Abstract of the United States, 1925, p. 27; Leon E. Truesdell, *Farm Population of the United States,* Washington, 1926, pp. 155 ff.; *Annuaire statistique de la République Polonaise,* 1924, p. 21; Riccardo Bachi, "Influenze demografiche della grande città sul territorio circostante," *Giornale degli economisti e rivista di statistica,* XLIX, 389–392 (1914); *Ten Years of Soviet Power in Figures* (in English), official publication of the Central Statistical Board of Soviet Russia, Moscow, 1927, pp. 76–77; *Annuaire statistique du royaume de Bulgarie,* 1926, p. 44; Eustace E. Windes, *High School Education of the Farm Population in Selected States,* United States Bureau of Education Bulletin No. 6, 1925, pp. 5–6.

[34] See Sanford R. Winston, *Illiteracy in the United States,* The University of North Carolina Press, 1930, chaps. v, xvi.

[35] R. B. Parsons, A Study of Adult Reading, master's thesis submitted to the University of Chicago in 1923; B. K. Farnsworth, A Study of the Reading Habits of Adults, master's thesis submitted to the Utah Agricultural College in 1925; William S. Gray and Ruth Munroe, *The Reading Interests and Habits of Adults,* New York, 1929, pp. 33–35, 93–103. Other literature may be found there.

PERCENTAGE OF VARIOUS OCCUPATIONAL CLASSES READING BOOKS, MAGAZINES, AND NEWSPAPERS

OCCUPATION	NUMBER OF CASES	BOOKS	MAGAZINES	NEWSPAPERS
Professional	68	91.2	100.0	100.0
Clerical	43	71.4	86.0	100.0
Domestic	30	46.7	67.7	96.7
Managerial	17	35.0	88.2	100.0
Commercial	60	50.0	83.7	96.7
Trade and labor	24	41.7	58.3	91.7
Public and personal service	26	15.4	23.0	84.6
Proprietorial	29	24.0	48.3	100.0
Agricultural	17	17.6	64.7	100.0

However, all this is true only of indirect experience or knowledge. When we take direct experience and especially the combination of direct and complete experience, the situation is different. From this standpoint the character and the volume of the direct experience, which puts a man daily in contact with real objects and events connected with his occupational work and routine of life, are especially important. Compare from this standpoint a farmer or peasant, on the one hand, with a worker from the majority of the clerical, skilled, semiskilled, and unskilled classes of the city, on the other. With some exceptions the urban occupations represent a series of manual or mental operations very much limited in diversity, relatively very monotonous, requiring, after they are learned, little exercise of mental capacity and initiative, and secluding the worker within a relatively narrow occupational environment, a factory, office, or shop, which hides, so to speak, the wide world from him, and does not put him into direct contact with life.

The mass of the city population is under conditions like those of robots, or automatons, where direct experience is exceedingly narrow and monotonous; the occupational environment is still more limited, and direct contact with reality is incomplete and reduced to an insignificant fraction of the real world.

This, in a less degree, also may be said of many urban intellectual occupational groups of the middle and upper strata,[36] whose

[36] Richard A. Freeman, *Social Decay and Regeneration*, Boston, 1921, pp. 199–203 and *passim*. See also George T. Patrick, *The Psychology of Social Reconstruction*, Boston,

experience is derived not from direct dealing with reality but with the shadows of reality, with various substitutes that as a rule are made at second hand.

Turn now to the occupational world of a farmer or peasant. The duties performed are much more numerous and diversified and they drive him into direct and substantial contact with numerous aspects of the world of real objects and experiences.[37] Almost every farmer or peasant, in this, is an encyclopedist. There is so much less division of labor in agriculture that the average farmer or peasant performs a great many different services.

One scarcely doubts that this direct occupational experience is very substantial and manifold; it is rather richer, less monotonous, more diversified, and more concerned with numerous aspects of the real world than that of the mass of the city population.

The farmer learns real things, so to speak, with his whole body, feet, hands, and muscles. Certainly his book knowledge and his knowledge of the terminology of many phenomena is often childish; and yet his knowledge of "how they behave and change and what are their particular qualities and characteristics" is remarkable and far better than the same type of knowledge in an urbanite and sometimes even in a specialist.[38]

From this fundamental distinction a series of other differences arise. Since the farmer has a very narrow field of indirect knowledge he may easily be misled or imbued with the most fallacious opinions, superstitions, and prejudices concerning all the experiences lying beyond the boundary line of his direct knowledge. On the other hand, his wider range of direct experience makes him less susceptible to many inadequate and wrong theories, beliefs, and propaganda that find considerable following within the bulk of the city population because of the narrow character of its direct experience. The wider range of direct experience gives a farmer a broad common sense and also, because his indirect knowledge is not disproportionately developed, a mental luggage more stable and less fluctuating than many attitudes and convictions of the city population based on an inadequate and greatly

1920; R. Woldt, "Die Fabrik als Umwelt des Arbeiters," *Zeitschrift für Völkerpsychologie und Soziologie,* Vol. IV (June, 1928); and Pitirim A. Sorokin, *Social Mobility,* pp. 516–519.

[37] See Adam Smith's opinions in chapter ii of this *Source Book.*

[38] Charles H. Cooley, *Social Organization,* New York, 1909, p. 99; A. L'Houet, *Zur Psychologie des Bauerntums,* Tübingen, 1905, pp. 29–51.

overdeveloped indirect experience, which makes many changes necessary in order to correct or to replace one attitude, opinion, or belief with another.

II. PSYCHOLOGICAL PROCESSES

1. *Perceptions, representations, memory, and associations.*—As a general rule it is possible to state that in perception, sensation, attention, imaginative reproduction, representation, and associations, the farmer or peasant mind or nervous system is more sensitive to objects and experiences connected, directly or indirectly, with the occupational world and less sensitive to many urban ones, relatively strange to the usual occupational environment.[39] In the same combination of stimuli, for instance, in viewing the same landscape, the farmer is attracted by its agricultural aspects, while the attention of an urban man, a manufacturer, workingman, poet, historian, or salesman, is attracted by quite different aspects of the landscape. The farmer notes characteristics missed by the urbanite, and misses many noted by the urbanite. The same attitude may be said to exist in the realm of memory and in the stream of associations.

Many impressions that are strange to the farmer's occupational world are likely to disappear quickly from his mind and memory. But impressions concerning his occupation and his vital interests are well retained. In a similar way, the streams of associations in the rural mind and the flow of various images and representations are continually colored and crowded with concepts of various agricultural objects and experiences. In the mind of a banker, mechanic, teacher, or merchant, the same objective stimuli call forth associations quite different in character, in which agricultural objects and conditions play very little, if any, part. This difference in its concrete form may have numerous variations; nevertheless, in the sense outlined, it is general and constant.

As to the comparative velocity of movement of these processes in the nervous systems of farmers and of the urban classes, nothing certain may be said. It is probable that, on the whole, the velocity of the mental processes of farmers is somewhat slower on account of the moderate rhythm of rural life as compared with urban. A series of general considerations and differences seems to suggest this. The very complexity and speed of urban life re-

[39] Sorokin, *op. cit.*, p. 321. This is the answer we suggest to the old question as to which are the more "suggestible," rural or urban peoples.

quires a quickness and plasticity of responses. The whole city life is permeated with hurry, rush, and a maddening pace. Rural life is much more free from this rush. One cannot hasten the processes of nature much; the country path or road is generally free from any great amount of hurrying traffic; the work itself requires not so much rush as persistency and patience. However, the hypothesis must be tested before it can be assumed to be valid.[40]

2. *Emotionalism and character.*—All the complex psychical processes and traits designated imperfectly by the terms, "character," "emotionalism," "will power," and so on, have been too little analyzed as yet; in fact, they have not been studied at all from the comparative standpoint. We do not know, therefore, whether there are some general differences between the agricultural and nonagricultural classes. Ordinary observation indicates that among farmers and peasants there are emotional and unemotional, extrovert and introvert types of personality, strong characters and weak characters. We do not know the proportion of each of these types among the agricultural population and among the urban classes. In a purely tentative way, and as a deduction from some environmental conditions of the rural class, it is possible to set forth the following hypothesis: On the whole, in comparison with the bulk of the city population, the farmer and peasant personality is less soft and feminized and more stern and austere or puritanic because of the conditions of life. The traits of virility, sternness, austerity, patience, endurance, and capacity for continued effort must be conspicuously developed in rural persons.[41]

From the standpoint of these traits there is a great deal of truth in the contention that the mind of the farmer or peasant is much nearer the spirit of the Old Testament, which has a stern, austere, rigid, always virile, just but never soft, moral code, than to that of the New Testament, which has a soft, forgiving, ultrahumanitarian, and tender conception of love.[42] One originated under the conditions of pure agriculture; the other was purely urban in its origin and early development.[43] We must not be surprised that

[40] See Sherwood Anderson's observations in his *Hello Towns!* New York, 1929.

[41] See Malcolm L. Darling, *The Punjab Peasant in Prosperity and Debt,* Oxford University Press, 1925, pp. xiii–xiv.

[42] For a very suggestive development of this theory see L'Houet, *op. cit.,* pp. 275–289.

[43] See Charles A. Guignebert, *Christianity, Past and Present,* New York, 1927, *passim.* "The most stubborn resistance [to Christianity] comes from the country people, the

the Roman peasants most stubbornly resisted Christianity; and that even after it was accepted, the real religious, moral, and social personality of the rural class remained nearer to the spirit of the Old Testament than to that of the New.

3. *Imagination.*—It is often said that farmer or peasant imagination and fantasy are much poorer than those of the city classes. Such a general statement is scarcely acceptable and is contradicted very definitely by the history of literature and art, for the poems, ballads, fairy tales, mythology, legends, and folk poetry of the agricultural or pre-urban period are marked by an unexcelled richness of fantasy and imagination. It is to be expected, moreover, since the agricultural stage is close to the childhood of human life, and since childhood is richer in imagination than later ages, that agricultural peoples will possess imagination and fantasy not less vivid, certainly, than that of highly urbanized peoples.[44]

The only probable difference is that the kinds of imagination and fantasy of rural and urban populations are likely to be different in their concrete forms in topics, images, associations, and combinations. It is difficult to imagine a poem or a legend by a city mechanic or a financier in which various spirits of corn, agricultural deities, agricultural landscape, agricultural objects, agricultural events, are the themes of his creative thought and of his fantastic imagination. He knows too little of these matters and is too little interested in them to be able to produce anything remarkable depicting those scenes and characters. It is probable that the fantasy of a peasant would not be particularly productive in an elaboration of an epic whose themes are engines, financial transactions, detective adventures, college teaching, or any other urban topic. The imagination of each is considerably affected and colored by his environment. As the environments differ, so do the forms of imagination in the corresponding populations.[45]

4. *Logic and reasoning processes.*—There is no valid evidence that the logical ability and the processes of thinking of the rural class are different in nature from those of the urban classes. The study of rural intelligence and mental diseases has not disclosed

pagani. The word *paganus* means a dweller in the country (*pagus*). It has now been demonstrated that the hostility of the peasantry to Christianity gave the meaning of 'pagan' to *paganus.*" See *ibid.*, p. 175.

[44] This was excellently developed by J. B. Vico in his famous *Scienza Nuova* and by Ibn-Khaldun in *Les prolégomènes.*

[45] See the chapters on religion and art in Vol. II of this work.

any superiority of the bulk of the urban population to the rural. Since intelligence is another term for the ability to think logically, there are no grounds for the assumption that the rural class possesses this ability in a lower degree than does the mass of the city populations.

Nor is there valid evidence upon which to base the conclusion that the thinking processes of the agricultural classes are different, less scientific, or more faulty than those of the city clasess, as is claimed by some writers. These theories either have been purely speculative and dogmatic or have presented defective and unconvincing evidence. All that it seems possible to say is that farmer or peasant logic and reasoning are sound within the field of direct experience and knowledge and often are defective, faulty, and biased in the sphere outside of direct experience and on generally unfamiliar subjects. The same is true of any city group, with the difference that the sphere of the direct and indirect experience of each of those groups varies. The judgments of experienced automobile mechanics about car construction, engines, and so on, would certainly be much better than those of an ordinary farmer; but the farmer's judgment about many agricultural conditions would certainly be much better than those of a garage man.[46]

III. ADDITIONAL PSYCHO-SOCIAL TRAITS

What are some of the differences in the psychological, moral, cultural, and social attitude and character of the rural class in comparison with those of the city population? It is evident that the field of these problems is full of perils for the investigator. The traits mentioned are so complex, elusive, variable, and intangible that the investigator often finds himself in a dark, wild forest without any compass, map, or path to indicate his location.

[46] M. C. Wilson, *The Effectiveness of Extension in Reaching Rural People,* United States Department of Agriculture Bulletin No. 1384, 1926, p. 19; Carle C. Zimmerman and John D. Black, *The Marketing Attitudes of Minnesota Farmers,* University of Minnesota Agricultural Experiment Station Technical Bulletin No. 45, 1926; Carle C. Zimmerman, "Types of Farmers' Attitudes," *Social Forces,* V, 591 ff. (June, 1927); Carle C. Zimmerman and C. Arnold Anderson, "Attitudes of Rural Preachers Regarding Church Union and Science," *Sociology and Social Research,* XII, 144–150 (November, 1927); Proceedings of the American Sociological Society, XX, 271 (1926); Filippo L. Carli, *L'equilibrio delle nazioni,* Bologna, 1920, pp. 187 ff.; Pitirim A. Sorokin, *Contemporary Sociological Theories,* New York, 1928, pp. 413 ff.; Franklin H. King, *Farmers of Forty Centuries; or, Permanent Agriculture in China, Korea, and Japan,* New York, 1927, pp. 17–23; Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* chap. xiii.

This caution is stressed at the very start in order to warn the reader about these dangers and to indicate that although we set forth several statements and principles we do not regard them as infallible truths.

Sources of material.—As an introduction to the subsequent analysis, it is advisable to cast a glance at the various sources of material used as a basis for the numerous theories in this field. In the first place an enormous mass of historical and statistical data concerning different overt actions, forms of conduct, and the psychical and mental characteristics of the rural class offers the most important basis upon which to test corresponding hypotheses. In the preceding and subsequent chapters of the *Source Book* this material is cited so extensively that we need not survey it here.

As to the psychical and mental characteristics of the rural class there are three sources of information. In the first place, many farmer and peasant characteristics, types, personalities, and traits are described in stories, novels, poetry, and other literature incorporating various authors' and story-tellers' observation and understanding of the farmer and peasant mind and soul. Second, the statements, songs, stories, letters, and so on of farmers and peasants themselves depict the thoughts of the peasants and farmers themselves concerning their own mind, character, personality, and life. Third, there are numerous theories of investigators of the farmer or peasant mind and personality and theories of rural sociologists, rural economists, social psychologists, and so on. Our survey of the sources must be concerned with these three classes of material. Let us examine to what extent the material serves as a solid basis for the construction of valid judgments concerning these traits.

Fiction, poetry, and other literature are sources for the sociological study of the psycho-social peculiarities of the farmer and peasant class. For an understanding of a single case various literary characters may be helpful, but for a construction of a theory of a typical rural mind and the constant differences between the urban and rural mind, these sources, with very few exceptions, are without great value. First, any such literary character represents a subjective view of the writer and not an objectively described reality. Secondly, it is sufficient to go through the characteristics

of the rural class given by different writers, and sometimes by the same writer in different places, to see that they often depict the rural mind in quite different ways and ascribe to it such numerous and different traits that no generalization is possible. Furthermore, no criterion is given by which we may judge whether the picture of one writer is more typical than the picture of another. The characterization of peasants and farmers given in various literary sources shows such a dependence of these pictures on the personal and social status of the writers (who are nearly all city men) that an investigator becomes aware at once that the writers are reflecting their own personalities and the fashion of the times rather than the peasant or farmer, as such.

Thus, this source is not particularly helpful for our purposes. It permits of only one conclusion: that among farmers and peasants there is a great variety of characters and different personalities. Some characteristics, such as familism, attachment to the land or farm, and piety, are stressed rather uniformly by almost all writers, and probably they are really typical of the rural class. This is practically all that may be ascertained from this source for our investigations.

The statements of the farmers and peasants themselves, their letters, written opinions, answers to questionnaires, and so on, are sources for the sociological study of their psychology, mind, character, and behavior. At present rather abundant material of this kind is given in the letters of the farmers and peasants. William I. Thomas and Florian Znaniecki present a study based on such material in their book, *The Polish Peasant in Europe and America.* Furthermore, there are many authentic opinions, beliefs, convictions, tastes, and other psychical experiences of farmers expressed in statements, accurately described interviews, articles, publications, and many similar forms. Such publications as *What Farm Women Think about Farm Life,*[47] *The Advantages of Farm Life,* and *The Farm Woman Answers the Question,*[48] may serve as examples of this sort of material. Many publications of farmer and peasant songs, such as Johannes Bolte's "Der Bauer im deutschen Liede," are other examples.[49] These and many similar

[47] Publication of the American Country Life Association and *Farmer's Wife.* See also "Forces of Change," *Farm and Fireside,* Vol. LIV, No. 1 (June, 1930).

[48] United States Department of Agriculture, 1924.

[49] This work by Bolte may be found in the German periodical, *Acta Germanica,* Vol. I (Berlin, 1890).

publications contain a summary of the opinions of several thousand farm people concerning various important problems.

To what extent are these publications and the opinions of the farm population helpful as reliable sources in our study? If the tain the material are ordinarily considerably spoilt by the editors and publishers. But granting that such spoiling of the material would have some value. Unfortunately, the publications that contain the material are ordinarily considerably spoilt by "editors" and "publishers." But granting that such spoiling of the material by various "enlightened editors" had not happened, could we then say that the material is adequate for a basis of sociological theories in this field? By no means. In the first place such opinions of the class studied rarely embrace a group sufficiently numerous to be representative of the whole class of the country; moreover, the sampling of the group whose opinions are given is rarely random.

Therefore, at the best, these opinions may be taken as valid only as they apply to individuals and should not be considered as typical of the farmer and peasant population at large. Moreover, these opinions are practically never corroborative; they usually differ and often they are entirely contradictory. Under such circumstances, an investigator does not have any criterion entitling him to say that "this opinion is typical of the class and this is not typical." As a result, the data are valid, at best, only among the group of individuals whose opinion is obtained and do not permit any generalization whatsoever.

Aside from these defects the "opinion material" has another shortcoming that greatly reduces its value. We know that opinions of the same persons are as a rule exceedingly variable and changeable—a characteristic quite common to almost all people. For instance, the great variations in political votes of different parties or for propositions, sometimes within a few months, are examples of this great flexibility of opinions. Change of opinions of congressmen in their voting within a period of only a few hours is another example. As a rule, it is sufficient that some personal circumstances change in order to produce notable alterations of opinion, particularly in a field where conditions are mutable.[50]

[50] For examples of this great instability or variability of opinions see Vilfredo Pareto, *Traité de sociologie générale,* Paris, 1917–1919, 2 vols., *passim.* The average length of time within which political opinions of the populations of Great Britain, France, Russia,

These considerations show the limitations of this source and its questionable value and reliability for our purposes even when the opinions are photographed with ideal accuracy.

The theories of various investigators of the farmer and peasant mind, character, attitudes, and psychology are very numerous. We shall limit the analysis to several typical examples that give a sufficient idea of the present knowledge in the field. The psychical differences between the farmer and peasant class and the classes of the urban population may be divided into two principal branches—inherent and acquired.

The fundamental claim of the proponents of the theories of inherent differences is the existence of innate psychical differences between the farmer or peasant class and the urban population. Such innate differences—in instincts, reflexes, prepotent drives, intelligence, emotions, energy, and talent—are due to the fact that the city attracts predominantly one type of person with specific innate characteristics, while the country keeps a different type. Because of this specific selection of the country and the city, rural and urban populations are composed of persons innately different.[51]

and the United States change is given in Pitirim A. Sorokin, *Social Mobility,* pp. 405–409, and *The Sociology of Revolution,* Philadelphia, 1925, chaps. iii-iv. Experimental studies of this vacillation have revealed the existence of a conspicuous discrepancy between the opinions and corresponding actions of the same persons even when there has not been present any particular intention to lie or to be insincere. See the conclusions of these experimental studies in Pitirim A. Sorokin, "Experimente zur Soziologie," *Zeitschrift für Völkerpsychologie und Soziologie,* IV, 1–10 (March, 1928); and in Hugh Hartshorne and Mark A. May, "Testing the Knowledge of Right and Wrong," *Religious Education,* XXI, 621–623 (February, 1926); XXII, 523 (May, 1927).

[51] As an example of this type of theory see Georges Vacher de Lapouge, *Les sélections sociales; cours libre de science politique professé à l'Université de Montpellier (1888–1889),* Paris, 1896, pp. 13–18. See Vacher de Lapouge's and Ammon's theories in Pitirim A. Sorokin, *Contemporary Sociological Theories,* pp. 233 ff. Their theory of the urban selection of the long-headed intelligent country people is now refuted. See chap. xvii of this *Source Book.* Further doubt as to the validity of this theory is cast by other studies. According to the studies of Karl Pearson and his school, the correlation coefficients between the cephalic index and the following psychical characteristics are as follows: between cephalic index and reaction time to sound, —.0112 ±.0165 and —.0049 ±.0098; between cephalic index and reaction time to sight, +.0161 ±.0165 and —.0079 ±.0094; between intelligence measured by school graduation rank and cephalic index (brachycephalic degree), —.061 ±.021; between intelligence measured by teachers' appreciation and brachycephaly, —.041 ±.014 (boys); +.067 ±.014 (girls). Thus all the correlations are negligible. The same is true of correlations between pigmentation and several other physical traits. There are other serious evidences that point to the same fact. See J. R. Musselman, "On the Correlation of Head Measurements and Mental Agility. Women," *Biometrika,* XVIII, 195–206 (1926); G. E. Harmon, "On the Degree of Relationship between Head Measurements and Reaction Time to Sight and Sound," *ibid.,* pp. 207–220; Karl Pearson, "Relationship of Mind and Body," *Annals of Eugenics,*

Without giving the details we conclude that as yet scarcely any study has succeeded in showing convincingly any inherent or innate differences in the psychology of urban and rural populations. They may exist, but the attempts to prove their existence have been unsuccessful because they are exceedingly difficult to detect. However, until such differences are proved, we are not entitled to admit or to accept them.

The proponents of the environmental and mixed theories indicate some psychical differences between rural and urban populations, either stressing that they are due to environmental conditions or claiming that both factors—heredity with selection and the rural-urban environments—are responsible for them. From ancient times there have been two streams of thought, one favoring the agricultural class, and the other favoring the city population. The writers favoring the agriculturists have bestowed all the principal virtues—health, vigor, virtue, bravery, perseverance, honesty, stability, broad-mindedness, and so on—upon the rural population. Such opinions are expressed in the *Sacred Books of the East,* in the writings of Confucius, Xenophon, Euripides, Socrates, Plato, Aristotle, Cincinnatus, Cato, and, later, Ibn-Khaldun, J. B. Vico, the elder Mirabeau, Quesnay, and many others.[52] The writers of the opposite school bestowed all positive characteristics —energy, initiative, courage, open-mindedness, love of progress, creative spirit, freedom, democracy, sociality, and so on—upon the urban population, especially upon the upper, the intellectual and ruling classes. Both the statements from the *Sacred Books of the East* and the opposite theories have persisted in the literature up to the present time and are incorporated in current textbooks and in modern works on sociology.[53]

I, 382–406 (1926). For other evidence see Sorokin, *op. cit.,* pp. 226–279. Further varieties of the "instinctivist" or innate difference school are to be found in the following works: Edward A. Ross, *Principles of Sociology,* New York, 1920, pp. 23–24; Charles B. Davenport, *Heredity in Relation to Eugenics,* New York, 1915, pp. 211 ff.; Hornell N. Hart, *Selective Migration as a Factor in Child Welfare in the United States,* pp. 80–81; Ernest R. Groves, *The Rural Mind and Social Welfare,* The University of Chicago Press, 1922; and A. L'Houet, *Zur Psychologie des Bauerntums,* pp. 27 ff. and *passim.*

[52] For a summary of these theories see chaps. i and ii of this *Source Book* and the readings in them.

[53] L'Houet, *op. cit.;* Paul Meissner, *Der Bauer in der englischen Literatur,* Bonn, 1922; L. L. Bernard, "A Theory of Rural Attitudes," *American Journal of Sociology,* XXII, 630 ff. (March, 1917), and "Research Problems in the Psychology of Rural Life," *Journal of Social Forces,* III, 446 ff. (March, 1925); John M. Gillette, *Rural Sociology,* revised ed., New York, 1928, pp. 50 ff.; Charles J. Galpin, *Rural Life,* New York, 1918, chap. ii, and *Rural Social Problems,* chap. ii, pp. 22 ff.; William I. Thomas and Florian

Without discussing them further we present our conclusions on these as well as on the other sources of knowledge concerning the rural mind.[54]

D. SUMMARY

The chief conclusions reached after a consideration of these three sources of information about the typical attitudes of the rural mind are as follows:

1. Many attributes ascribed to the farmer by writers, such as individualism, conservatism, emotionalism, magical mind, and so forth, are called by such broad and indefinite names that one can neither understand the meaning of the author nor criticize the concept. Without a proper definition of these attributes, the vague and manifold meaning makes the statements also very obscure.

2. Many of these students refute their own statements by opposite ones on another page. Warren Wilson makes farmers individualistic on one page and on the next has them competing by family groups. Is it possible for a man to be an individualist and at the same time be thoroughly bound up in family organization? The students who have used these terms have not defined them. Adna F. Weber makes city people unbiased in one sentence and the originators of the class struggle in the next. Can both be true?

Znaniecki, *The Polish Peasant in Europe and America,* revised ed., Chicago, 1928; Joseph B. Ross, "Agrarian Changes in the Middle West," Political Science Quarterly, XXV, 625 ff. (December, 1910); Adolph Bartels, *Der Bauer in der deutschen Vergangenheit,* Leipzig, 1900; Carl C. Taylor, *Rural Sociology: A Study of Rural Problems,* New York, 1926, chap. xxi; Adna F. Weber, *The Growth of Cities in the Nineteenth Century: A Study in Statistics,* New York, 1899, pp. 432 ff.; Nicholas J. Spykman, "A Social Philosophy of the City," Proceedings of the American Sociological Society, XX, 46 ff. (1926); Warren H. Wilson, *The Evolution of the Country Community: A Study in Religious Sociology,* Boston, 1912; James M. Williams, *Our Rural Heritage,* New York, 1925, and *An American Town: A Sociological Study,* New York, 1906; Newell L. Sims, *A Hoosier Village,* New York, 1912; John G. Thompson, *Urbanization, Its Effects on Government and Society,* New York, 1927, chaps. i, ii; Wilhelm H. Riehl, *Die Naturgeschichte des Volkes als Grundlage einer deutschen Sozialpolitik,* Stuttgart, 1892–1899, especially Vol. II, 41–123; Erick Hauck, *Zur differentiellen Psychologie des Industrie- und Landkindes,* Langensalza, 1929.

[54] For further studies see Arnošt Bláha, *Sociologie sedláka a dělníka* (*The Sociology of the Workman and the Peasant*), Prague, 1925, pp. 121–194, and the books on rural sociology, cited above, by Vogt, Hawthorne, Lundquist and Carver, and Sims. See also Charles J. Galpin, *Rural Social Problems;* John M. Phelan, *Readings in Rural Sociology,* New York, 1920; Newell L. Sims, *The Rural Community, Ancient and Modern,* New York, 1920; Norman S. Gras, *History of Agriculture,* New York, 1920; and numerous magazine articles such as that of Newell L. Sims in the *Political Science Quarterly,* XXXV, 54–76 (March, 1920).

3. Many students claim quite opposite qualities for the rural and the urban mind. One says the former is altruistic and the latter selfish, and another says the reverse is true. Which is right?

4. Since none of these students give sufficient data to prove their statements we are forced to conclude that very little has been established in this field that is certain or valid. No one can tell whether this is due to the extreme complexity and variability of the qualities studied or to the lack of a proper method of approach and of available material. This field is still open for study.

Although all the three sources surveyed give some insight into the problem and some enlightening suggestions on the mind and character of the rural class, they prove very little that one may claim as typical of the rural mind.

Under such circumstances every investigator who wishes to arrive at valid conclusions in this field and to be as free as possible from assumptions, preconceptions, and speculations in his statements has but one way to proceed: first, to limit the number of the characteristics to be studied; secondly, to define rigorously the terms used, when they are vague in their common use; thirdly, to study carefully all the available factual data in the given field, to check the investigators' biases, and to establish conclusions on something more valid than speculation or distorted fragments of factual data. The authors of this *Source Book* have attempted to fulfill these conditions.

The second volume gives a description and analysis of the most important psycho-social and cultural characteristics of the rural class and the trend of their change. Our analysis of the institutional and cultural organization of the rural world has been, at the same time, an objective study of the psycho-social traits of the rural people. Beginning with familism and passing to the consideration of other traits, we have elucidated the most important characteristics of the agricultural class in economic, religious, moral, political, aesthetic, and other fields. As the reader will notice, in this study we have tried to base our conclusions not only and not so much on such incomplete and impressionistic data as novels, letters, or opinions, as on the total quantitative and historical data and other solid objective material, which we consider the only sound basis for any study of this sort.

These traits have been described in the second volume and need

not be repeated here. We disagree with all the statements in the readings that ascribe to the rural class traits essentially different from those given in the second volume of this *Source Book*.

Readings.—These substantiate the points made in this introduction. In addition to the usual types of readings given in other chapters we have felt it best to include several summaries, which give the references, authors, types of study, and principal conclusions of a great number of detailed studies of rural-urban intelligence. The first of these summaries covers the more important intelligence tests; the second covers the more important studies of the origin of men of genius, leaders of various types, and children of exceptional intelligence quotients. Other readings are translations of the more important foreign sources dealing with this topic or reprints of papers in various British or American journals that are exceptionally important and are not ordinarily within reach of the majority of investigators in rural sociology. The remaining readings depict the personality of farmers and peasants as it has been characterized by several prominent investigators and as it has been reflected in literature. The several works cited above and in the readings constitute a bibliography of the subjects discussed in this chapter.

175. Carle C. Zimmerman, Pitirim A. Sorokin, and Charles J. Galpin: Tests of Rural and Urban Intelligence

The following pages summarize the chief data of the more important intelligence tests up to the present time. They are classified under various heads with references in the notes. Each test reports the author, the number and type of children tested, and the chief conclusions.

Summary of Blanket Comparisons of Rural and Urban Scores in Intelligence Tests

Author	Comparison	Conclusions
S. L. Pressey and J. B. Thomas.[1]	268 children in a good farming district and 2,800 children in small cities of Indiana.	Country children showed slightly poorer ability in all tests.

[1] S. L. Pressey and J. B. Thomas, "A Study of Country Children in a Good and a Poor Farming District, by Means of a Group Scale of Intelligence," *Journal of Applied Psychology*, III, 283–286 (September, 1919).

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Continued*

AUTHOR	COMPARISON	CONCLUSIONS
S. L. Pressey and J. B. Thomas.[1]	270 children in a poor farming district and 2,800 children in small cities of Indiana.	Country children had considerably lower averages. Children in the good farming district had higher averages than those in the poor district.
Luella W. Pressey.[2]	183 farm children, 6 to 8 years of age, and 2,800 children in small cities of Indiana.	City children still had superior averages but not quite as high as the tests with older children showed.
Fred Engelhardt.[3]	4 open-country schools and 3 in villages and towns of Minnesota.	The average *IQ* in grades 1–8 was lower in the open-country schools.
Fred Engelhardt.[3]	63 resident and 35 nonresident (farm) pupils in high schools of Lake Crystal, Minnesota.	Nonresident pupils predominated in the lowest and next to highest classes. The total distribution favored the resident.
William H. Pyle.[4]	Several thousand city and country children in southwestern Missouri.	City children had a slight advantage except in certain age groups in which country children excelled in substitution and in concrete rote memory.

[1] S. L. Pressey and J. B. Thomas, "A Study of Country Children in a Good and a Poor Farming District, by Means of a Group Scale of Intelligence," *Journal of Applied Psychology,* III, 283–286 (September, 1919).

[2] Luella W. Pressey, "The Influence of Inadequate Teaching and Poor Environment upon Results with Tests of Intelligence," *Journal of Applied Psychology,* IV, 91–104 (March, 1920).

[3] Fred Engelhardt, *Survey Report of Lake Crystal Schools,* University of Minnesota College of Education Bulletin, Educational Monograph No. 10, 1926.

[4] William H. Pyle, *The Nature and Development of the Learning Capacity,* Educational Psychology Monographs, 1925, No. 25; and *A Manual for the Mental and Physical Examination of School Children* (revised), University of Missouri Bulletin No. 12, 1920.

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Continued*

AUTHOR	COMPARISON	CONCLUSIONS
William H. Pyle.[4]	1,500 MacDonald County, Missouri, rural children and 13,500 urban children of Missouri.	Scores of country boys of the same age were 78 per cent and of country girls were 81 per cent of city scores.
James H. Hinds.[5]	Pupils of 4 open-country, 2 village, 6 town, and 1 city high school in Texas.	The Otis index of brightness increased progressively from 77 for the open-country schools to 100 for the city high school.
Warren W. Coxe.[6]	24 schools of Cincinnati including 2 in agricultural neighborhoods on the edge of the city.	Schools in agricultural neighborhoods had about the same average as all other schools, but had a lower average than those patronized primarily by the business and the professional classes.
H. W. Chase and C. C. Carpenter.[7]	Farm, village, and university faculty children (white), 9 to 13 years of age, Chapel Hill, North Carolina, 1916.	Median *IQ* was for the farm 81, village 92, and faculty 115.
J. F. Dashiell and W. D. Glenn.[8]	Farm, village, and university faculty children (white) 9 to 13 years of age, Chapel Hill, North Carolina, 1925.	Median *IQ* was for the farm 94, village 99, and faculty 112.

[4] See preceding note.

[5] James H. Hinds, "A Comparison of the Brightness of Country and City High-School Children," *Journal of Educational Research,* V, 120–124 (February, 1922).

[6] Warren W. Coxe, "School Variation in General Intelligence," *Journal of Educational Research,* IV, 187–199 (October, 1924).

[7] H. W. Chase and C. C. Carpenter, "The Response of a Composite Group to the Stanford Revision of the Binet-Simon Tests," *Journal of Educational Psychology,* X, 179–188 (April, 1919).

[8] J. F. Dashiell and W. D. Glenn, "A Re-examination of a Socially Composite Group with Binet and with Performance Tests," *Journal of Educational Psychology,* XVI, 335–340 (May, 1925).

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Continued*

AUTHOR	COMPARISON	CONCLUSIONS
F. J. Adams.[9]	All school children of a rural (Modoc) County, California, and children of various cities and the norms for the same tests established in the two groups.	The smaller the school, the lower the *IQ* was. All rural schools had lower quotients than urban schools.
Rudolf Pintner.[10]	154 school children of a small Ohio village and city norms developed by Pyle for the same tests.	Rural pupils were below norms for ages and grades.
Rudolf Pintner.[10]	Children of 4 cities, 1 village, and 4 one-room rural schools. (Locality less than 2,500 was considered a village.)	On the average, the increase of the urbanization of the school was associated with an increase of the median score.
William F. Book.[11]	All students of one Indiana county divided into rural and urban. (The classification was based on the location of the school.)	Country medians were lower than city medians at every age and in every grade.
William F. Book.[11]	1,165 pupils of an Indiana county divided into city and country.	City children in all age groups, exclusive of the 15th year, excelled. Children of all degrees of intelligence were found in all the schools of the country.

[9] F. J. Adams, An Intelligence Survey of a Rural School System, unpublished master's thesis, University of California, May, 1922.

[10] Rudolf Pintner, "A Mental Survey of the School Population of a Village," *School and Society*, V, 597–600 (May, 1917).

[11] William F. Book, *Variations in Mental Ability and Its Distribution among the School Population of an Indiana County*, University of Indiana Extension Division Bulletin No. 4, 1918, pp. 100–131.

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Continued*

AUTHOR	COMPARISON	CONCLUSIONS
Helen L. Koch and Rietta Simmons.[12]	3,316 rural and urban children of Texas. (Tried to get a fair sample. Counties not having large towns were considered rural.)	White children in city schools excelled rural white in every age group. Urban Mexicans excelled rural Mexican in every age group.
Henry H. Goddard.[13]	977 city children and 670 country children of an eastern state. (Open country was considered as rural.)	City children were superior on the average.
James F. Duff and Godfrey H. Thomson.[14]	13,625 children 11 to 13 years of age of Northumberland. (Census definition of rural and urban used. Exclusive of two cities these were all in the county at these ages in that year.)	Highest ability was found close to the cities and far away from the cities.
M. E. Bickersteth.[15]	1,200 children of Yorkshire Dales and Leeds, England.	City children were superior in reasoning and in selective discrimination; country children, in memory. (Due to environment.) Brighter children were found in cities and far from cities.

[12] Helen L. Koch and Rietta Simmons, *A Study of the Test-Performance of American, Mexican, and Negro Children,* Psychological Monographs, Vol. XXXV, No. 5 (1926).

[13] Henry H. Goddard, "Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence," *Pedagogical Seminary,* XVIII, 232–259 (1911).

[14] James F. Duff and Godfrey H. Thomson, "The Social and Geographical Distribution of Intelligence in Northumberland," *British Journal of Psychology,* XIV, 192–198 (October, 1923).

[15] M. E. Bickersteth, "The Application of Mental Tests to Children of Various Ages," *British Journal of Psychology,* IX, 23–73 (December, 1917).

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Continued*

AUTHOR	COMPARISON	CONCLUSIONS
George B. Gordon.[16]	2,730 high school students in villages less than 2,500 population and 2,168 in towns 2,500 to 3,500 in Minnesota.	"There is without doubt a real city advantage in intelligence as measured by the Army Alpha." "It is highly probable that this difference is inherent."
Cyril L. Burt.[17]	All children of a rural parish in Warwickshire. (This parish is the home of Shakespeare's grandfather.)	Average mental index of the native population was 81. The intelligent had migrated to the cities.
Charles A. Nelson and Eustace E. Windes.[18]	171 high school pupils of a town of 4,000 population in Washington and 232 pupils coming from farms in the same school.	According to the Otis index of brightness city children were 7 points higher. Farm children made most rapid progress through high school.
Eustace E. Windes.[18]	246 nonfarm and 313 farm pupils in the same high school in Connecticut.	Nonfarm children were slightly higher. The greatest difference was in the scores of the boys. Great differences in rural-urban intelligence were considered doubtful.
Eustace E. Windes.[18]	65 nonfarm and 82 farm high school pupils of Madison, Connecticut.	Nonfarm boys excelled farm boys while farm girls were higher than nonfarm girls. The rural population was not affected by social selection.

[16] George B. Gordon, A Study of the Intelligence Differences of Rural and City High School Children on the Basis of the Army Alpha Tests, unpublished master's thesis, Ohio State University, 1924.

[17] Cyril L. Burt, *Mental and Scholastic Tests,* London, 1922.

[18] Charles A. Nelson and Eustace E. Windes, *A Type of Rural High School, Mount Vernon Union High School, Skagit County, Washington,* United States Bureau of Education Bulletin No. 4, 1924, pp. 11–12; Melvin E. Haggerty, *Educational Achievement (Rural School Survey of New York State,* Vol. VI), Ithaca, New York, 1922, pp. 220–222.

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Continued*

AUTHOR	COMPARISON	CONCLUSIONS
P. L. Gray and R. E. Marsden.[19]	32 children of Yorkshire Dales, England, and 213 children of an industrial town.	Country children were superior to town children from the poorer parts of town and not very much inferior to those from the better parts of town.
Oklahoma Educational Survey, 1922.[20]	27,000 children of 16 counties classified as rural, consolidated, towns, and cities.	Rural children averaged lowest in every grade. Children in consolidated schools had always the next lowest average.
Charles C. McCracken.[21]	4,556 pupils in schools of an Ohio town, some villages, and the open country. (The town had a population of 10,000.)	City children were lower than village and rural children in the elementary grades but higher in the upper grades. This is due to a comparison of a "good" farming territory with an industrial town.
H. M. Lufkin.[22]	564 children in rural schools of central New York and children in some western cities.	Urban children excelled.
I. N. Madsen.[23]	12,000 school children of Idaho divided into rural and urban on the basis of the size of the school.	Urban children excelled.

[19] P. L. Gray and R. E. Marsden, "Intelligence Tests in Rural Schools," *Journal of Experimental Pedagogy,* VI, 224–233 (March, 1922).

[20] See the section on "Educational Tests and Measurements," in *Public Education in Oklahoma,* Report of a Survey of Public Education in the State of Oklahoma, Washington, 1922.

[21] Charles C. McCracken, *Logan County and Bellefontaine, Ohio, School Survey,* Columbus, 1923.

[22] H. M. Lufkin, "Report on the Use of the Army Alpha Test in Rural Schools," *School and Society,* XIII, 27–30 (January, 1921).

[23] I. N. Madsen, "Some Results from a Testing Program in Idaho," *School and Society,* XIII, 668–671 (June, 1921).

SUMMARY OF BLANKET COMPARISONS OF RURAL AND URBAN SCORES IN INTELLIGENCE TESTS—*Concluded*

AUTHOR	COMPARISON	CONCLUSIONS
Marvin L. Darsie.[24]	275 urban, 120 rural American-born Japanese children aged 10-15 years in California, 1920. Revised Simon-Binet tests were used in this study.	The median of the large cities was 99.3; all cities, 86.2; and rural, 77.0. Rural had a language handicap, which does not explain all differences.
John T. Wahlquist.[25]	Rural and urban common school children of Utah, 1925–1926. (Ten county districts and one city district.)	In each grade, and among both sexes, urban children excelled rural. The mean-accomplishment-ratio or *educational quotient* representing $\frac{\text{Educational Age}}{\text{Chronological Age}}$ for each age and sex was higher among rural children except in the case of 7th grade girls, in which group the city excelled the country.
Marvin J. Van Wagenen.[26]	School children of Minnesota.	"The seventh grade rural pupils are four months younger mentally than the town and city pupils of the seventh grade, while the eighth grade rural pupils are six months younger mentally than the town and city pupils of the same grade."

[24] Marvin L. Darsie, *The Mental Capacity of American-Born Japanese Children,* Comparative Psychology Monographs, III, 56 ff. (1926).

[25] John T. Wahlquist, "Intelligence of Rural and Urban Children," *Elementary School Journal,* XVII, 682–684 (May, 1927). See also a more elaborate discussion in the *Survey of Education in Utah,* United States Bureau of Education Bulletin No. 18, 1926.

[26] Marvin J. Van Wagenen, *Comparative Pupil Achievement in Rural, Town, and City Schools,* The University of Minnesota Press, 1929.

Occupational Comparisons

Author	Study	Conclusions
William F. Book.[27]	5,748 high school seniors of Indiana, 1920. 1,963 were children of farmers. (Urban pupils were grouped according to F. W. Taussig's hierarchial classification.)	Children of farmers ranked lowest in 7 classes of occupations; those of professionals ranked highest; and those of day laborers next above farmers.
James F. Duff and Godfrey H. Thomson.[28]	All (13,625) school children from 11 to 13 years of age in Northumberland, England, exclusive of the cities of Newcastle and Tynemouth, 1922.	Children of all agriculturists had an *IQ* median of 97.6 at top of the C group. This was above the group of "all laborers" and below "miners and quarrymen." However, an analysis of agriculturists' children revealed that the children of farmers, farm foremen, and shepherds averaged between 98 and 99, which is the same as boilermakers and better than coal miners (hewers).
Emily S. Dexter.[29]	2,782 grade children in 13 schools of Madison, Wisconsin, 1922. (60 were children of farmers.)	Farm children were classed with the business group, which was placed above skilled labor and third from the top. The average *IQ* of farm children was 94 or at the top of the group of semi-skilled labor.

[27] William F. Book, *The Intelligence of High School Seniors as Revealed by a Statewide Mental Survey of Indiana High Schools,* New York, 1922.

[28] James F. Duff and Godfrey H. Thomson, "The Social and Geographical Distribution of Intelligence in Northumberland," *British Journal of Psychology,* XIV, 192–198 (October, 1923).

[29] Emily S. Dexter, "The Relation between Occupation of Parent and Intelligence of Children," *School and Society,* XVII, 612–614 (June, 1923).

OCCUPATIONAL COMPARISONS—*Continued*

AUTHOR	STUDY	CONCLUSIONS
Stephen S. Colvin and Andrew H. MacPhail.[30]	2,532 seniors in the high schools of Massachusetts, ranked according to the occupation of their parent, 1922.	Farmers were lowest in 7 groups of occupations. However, when boys alone were considered, farmers ranked above day laborers. When ranked according to the percentage scoring in the highest state quintile, farmers ranked above day laborers. The 36 boys who chose farming as a profession had the highest average test scores.
Douglas Fryer.[31]	Research on the rank of 98 occupational designations. (The work was done at the Y. M. C. A. of the City College of New York.)	Farmers were placed at the bottom of skilled laborers. They rated C in a range from A through D. Their range of intelligence was better than that of the whole C group.
Hector MacDonald.[32]	2,047 (all) children 11 to 13 years of age, arranged according to groups of parental occupations on the Isle of Wight, August, 1925.	Farmers had an *IQ* of 98.2, identical with the average of the whole study. Farm laborers, unskilled labor, had an average of 93.8. However, 13 occupations ranked lower than farm labor and 45 lower than farmers. The agricultural class as a whole ranked between laborers and artisans in this test.

[30] Stephen S. Colvin and Andrew H. MacPhail, *Intelligence of Seniors in the High Schools of Massachusetts,* United States Bureau of Education Bulletin No. 9, 1924.

[31] Douglas Fryer, "Occupational-Intelligence Standards," *School and Society,* XVI, 273–277 (September, 1922).

[32] Hector MacDonald, "The Social Distribution of Intelligence in the Isle of Wight," *British Journal of Psychology,* XVI, 123–129 (October, 1925).

OCCUPATIONAL COMPARISONS—*Continued*

AUTHOR	STUDY	CONCLUSIONS
James H. Hinds.[33]	569 high school pupils of Texas ranked according to occupation of fathers. (The Otis index of brightness was employed in this study.)	Farm children ranked above those of personal service and common labor families, and below those of the clerical and skilled trades. Professions and business ranked highest.
Melvin E. Haggerty and Harry B. Nash.[34]	6,000 grade pupils and 1,500 high school students included in the New York rural school survey were classified according to the occupations of their parents.	In the grade school the ranking was as follows: professional, business, clerical, skilled, and semiskilled. In the high school group farmers dropped to last place. The difference was attributed to the selective influence of the high schools.
Camp Dix army test group.[35]	204 drafted men representing 19 occupations. There were 20 farmers.	Farmers ranked 14th among 19 occupations. Chauffeurs, teamsters, firemen, factory workers, and laborers all had lower averages than farmers. Skilled tradesmen ranked directly above.
Camp Lee army test group.[35]	2,707 drafted men, exclusive of all illiterates and foreigners, representing 36 occupations.	Farmers ranked 27th among 36 occupations. Butchers, cooks, foundry, factory men, blacksmiths, stewards, waiters, laborers, and barbers had averages below farmers. Skilled laborers were directly above farmers.

[33] James H. Hinds, "Does Mentality Influence the Choice of High School Subjects?" *Vocational Educational Magazine*, II, 178–183 (November, 1923).

[34] Melvin E. Haggerty and Harry B. Nash, "Mental Capacity of Children and Paternal Occupation," *Journal of Educational Psychology*, XV, 559–572 (December, 1924).

[35] Chapter on occupational ratings (army tests) in Memoirs of the National Academy of Sciences, Vol. XV (1921).

OCCUPATIONAL COMPARISONS—*Concluded*

AUTHOR	STUDY	CONCLUSIONS
Camp Wadsworth army test group.[35]	7,550 drafted men representing 55 occupations. There were 378 farmers.	Farmers ranked 51st among 55 occupations. Teamsters, laborers, and barbers ranked lower. Semiskilled and skilled laborers ranked directly above.
Camp Devens army test group.[35]	15,122 cases of the illiterate white draft representing 57 occupations. There were 2,017 farmers.	The scores were about the same as at Camps Wadsworth and Lee. The median score was 133. Farmers averaged 97.
Army surgeon-general's study.[35]	Drafted men from 16 camps. Both alpha and beta tests, which include both illiterates and literates, were used. There were 6,886 farmers.	Data had almost perfect correlation with the Wadsworth group. Farmers ranked in the C group with miners, laborers, teamsters, and barbers. Farmers were unusually low because the best farmers were exempted from the draft. Their rank represented the intellectual level of the unskilled, unmarried, farm labor group, and hence was low.
Robert M. Bear.[36]	94 Freshmen who entered Centre College, Kentucky, fall of 1925. (Thurstone's psychological examination of mental ability was used.)	Farmers' children made the lowest median score in tests and also in college grades in the first semester. Artisans made the next lowest median scores. No common laborers were reported in this study.

[35] Chapter on occupational ratings (army tests) in Memoirs of the National Academy of Sciences, Vol. XV (1921).

[36] Robert M. Bear, "Factors in the Achievement of College Freshmen," *School and Society*, XXIV, 802 ff. (December, 1926).

College Students in Agriculture Compared with Those in Other Schools

Author	Study	Conclusions
Ellis L. Noble and George F. Arps.[37]	5,950 Ohio State University students with the Army Alpha.	Agriculture had a median score of 133 as compared with 136 for the entire university. Dentistry, Veterinary, Pharmacy, and Education were below Agriculture.
David S. Hill.[38]	3,500 students at the University of Illinois with Army Alpha.	Students in the School of Music averaged lower, but all other schools had medians higher than the College of Agriculture.
George L. Roberts and G. C. Brandenburg.[39]	1,162 students at Purdue University with Army Alpha.	Total median score was 129.1. Agriculture was 128.8. The only school lower than Agriculture was Science with 119.4. This was explained by a bias towards women in the sample. (Women rated lower than men on Army Alpha.)
Myra W. Kuenzel and Herbert A. Toops.[40]	Freshmen at Ohio State University, 1919–1924.	Students of the College of Agriculture had much lower ratings than those of the university as a whole.
Fred C. Frey.[41]	2,000 students of the class of 1926 at the University of Minnesota.	Two-thirds of the students in the College of Agriculture were not from farms but came from towns and cities.

[37] Ellis L. Noble and George F. Arps, "University Students' Intelligence Ratings According to the Army Alpha Test," *School and Society,* II, 233–237 (February, 1920).

[38] David S. Hill, "Results of Intelligence Tests at the University of Illinois," *School and Society,* IX, 542–545 (May, 1919).

[39] George L. Roberts and G. C. Brandenburg, "The Army Intelligence Tests at Purdue University," *School and Society,* X, 776–779 (December, 1919).

[40] Myra W. Kuenzel and Herbert A. Toops, "The Relative Stability of Intelligence Levels in Colleges," *School and Society,* XXII, 176–184 (August, 1925).

[41] Fred C. Frey, Some Selective Phases of Rural-Urban Migration, unpublished doctor's thesis, University of Minnesota, 1929.

RURAL-URBAN ACHIEVEMENTS IN SPECIFIC SCHOOL SUBJECTS

AUTHOR	STUDY	CONCLUSIONS
Ernest R. Wood.[42]	Efficiency in arithmetic in rural and urban territories in California and Ohio.	City children excelled.
W. J. Heckert.[43]	Cleveland arithmetic tests were given in small city, village, and rural schools in the Miami Valley of Ohio.	The Cleveland score was higher than the others. Rural schools in 35 out of 60 cases had a higher score than schools of small cities and villages.
J. Crosby Chapman and H. L. Eby.[44]	71 rural and 71 children of Cleveland, Ohio.	There was a small difference in cancelling, substitution, opposites, and spelling; city excelled greatly in writing, information, addition, hard directions, and composition. The difference is attributed to the methods employed in different types of school.
Norman N. Frost.[45]	Summary of 28 studies of achievement in town and country schools, other than those reported in this table.	20 studies found scores higher in urban schools, 6 reported negligible differences, and 2 found that the rural schools excelled. Studies of composition, writing, arithmetic, and reading were included in this study.

[42] Ernest R. Wood, "Tests in Efficiency in Arithmetic: A Comparison of the Results Obtained in the Rural Schools of Santa Clara County and Results Obtained in a County in Southeastern Ohio," *Elementary School Journal,* XVII, 446–453 (February, 1917).

[43] W. J. Heckert, "The Cleveland Survey Tests in Arithmetic in the Miami Valley," *Elementary School Journal,* XVIII, 447–457 (February, 1918).

[44] J. Crosby Chapman and H. L. Eby, "A Comparative Study by Educational Measurements of One-Room Rural-School Children and City-School Children," *Journal of Educational Research,* II, 636–646 (October, 1920).

[45] Norman N. Frost, A Comparative Study of Achievement in Town and Country Schools, doctor's thesis submitted to Columbia University in 1921.

RURAL-URBAN ACHIEVEMENTS IN SPECIFIC SCHOOL SUBJECTS—*Continued*.

AUTHOR	STUDY	CONCLUSIONS
Norman N. Frost.[45]	Comparison of 68 white public schools of Madison County, Kentucky, and schools of Louisville, Kentucky, Paterson, New Jersey, and St. Paul. (Most important school subjects compared.)	Children in 6-month schools had a lower score than those in 9-month schools. All rural schools were lower than city schools in almost every characteristic.
G. C. Brandenburg.[46]	Entrance examination in English given to 1,004 freshmen at Purdue University, 1919.	The median grade of the College of Agriculture was 61.9 compared with a total median of 65.7. Agriculture ranked lowest.
Virginia public school survey.[47]	Comparison of the most important subjects in most of the schools of Virginia.	With minor variations, the four-room schools excelled the one-room schools; and all city schools excelled all rural.
Melvin E. Haggerty.[48]	Rural school survey of New York State.	Small rural schools had lower scores than large rural schools and all rural than urban in almost every test except multiplication. Differences in mental age favored urban but chronological age, rural.
General Education Board.[49]	Spelling, reading, and addition in public schools of Kentucky.	Urban excelled rural in every test and in every grade. Size of the school was correlated with improved test grades.

[45] Norman N. Frost, A Comparative Study of Achievement in Town and Country Schools, doctor's thesis submitted to Columbia University in 1921.

[46] G. C. Brandenburg, "The Quality of Freshman Composition," *School and Society*, XIV, 579–584 (December, 1921).

[47] "Results of Instruction Measured," *Virginia Public School Survey*, New York, 1920, Part I, chap. vi.

[48] Melvin E. Haggerty, *Educational Achievement* (*Rural School Survey of New York State*, Vol. VI), Ithaca, New York, 1922.

[49] *Public Education in Kentucky*, New York, 1921. This consists of a report by the General Education Board of New York prepared under the direction of the Kentucky Educational Commission appointed in 1920 under a state law.

RURAL-URBAN ACHIEVEMENTS IN SPECIFIC SCHOOL SUBJECTS—*Concluded*

AUTHOR	STUDY	CONCLUSIONS
Iowa Bureau of Educational Research.[50]	Spelling and arithmetic in schools of 7 counties of Iowa.	All rural averages were nearly always lower than city norms. However, the consolidated schools often exceeded the norms established in the city schools.
Clifford Woody.[51]	Country and city trained pupils in high schools of Bloomington, Indiana, in 8 important high school subjects.	City children excelled in literature, composition, Latin, history, and botany. Country children excelled in German, mathematics, physical geography, and physics. There was considerable variation among boys and girls from city and country. However, city boys excelled all groups in botany, physical geography, and physics.
Marvin L. Darsie.[52]	Japanese children 10–15 years of age in California in reading, spelling, language, and arithmetic.	In all grades urban children excelled. The least difference was found in arithmetic.
I. N. Madsen.[53]	Rural and urban children of Idaho.	Rural children had lower score in reading and arithmetic. Small city schools had lower score than Grade A schools.

[50] Report furnished by H. A. Greene, director of the Iowa Bureau of Educational Research.

[51] Clifford Woody, quoted by Henry L. Smith in *A Survey of a Public School System*, Teachers College, Columbia University, Contributions to Education, No. 82, 1917, pp. 208 ff.

[52] Marvin L. Darsie, *The Mental Capacity of American-Born Japanese Children*, Comparative Psychology Monographs, III, 68 ff. (1926).

[53] I. N. Madsen, "Some Results from a Testing Program in Idaho," *School and Society*, XIII, 668–671 (June, 1921)

176. Myra E. Shimberg: An Investigation into the Validity of Intelligence Test Norms with Special Reference to Urban and Rural Groups *

SCALING INFORMATION A

Construction.—The first step in the construction of the test was the preparation of the material. In this preliminary work we were fortunate enough to have the cooperation of a group of teachers of elementary and high schools. Questions which they submitted were recast, modified, and supplemented until we had eighty questions of varying degrees of difficulty, covering the different fields of common-sense information, e. g., nature, industry, etc. They were so framed that they could not be answered by "yes" or "no." These questions were then mimeographed on two sheets (easy and hard questions being scattered throughout in irregular order) and tried out on 764 urban children in grades 4–12 inclusive. Not more than two grades were taken from the same school. . . .

Standardization.—As subjects in the standardization of this [urban] test we secured the entire school population of a city of 47,876 inhabitants (1920 census). This city was considered by its assistant superintendent to be "average." In a state survey in arithmetic it had fallen midway in the distribution. . . .

Scaled Information A is now in daily clinical use at the Judge Baker Foundation, Boston, Mass., and has been found satisfactory as a test of practical common-sense information. . . .

SCALED INFORMATION TEST A

1. What are the colors in the American flag?
2. Of what are shoes made?
3. How many hours are there in a day?
4. What holiday comes in December?
5. Who is President of the United States?
6. What people were in America when the white men came?
7. What state do you live in?
8. Where does the sun rise?
9. Name five vegetables.

Name .....
.....
School .....
.....
Age: Yrs..... Mos.....
Grade .....

* Taken from Myra E. Shimberg, *An Investigation into the Validity of Norms with Special Reference to Urban and Rural Groups,* Archives of Psychology, No. 104, 1929, pp. 8–9, 11, 12, 14–15, 18, 30, 31, 40–41, 42, 45, 50, 61–62. Reprinted with the permission of the author and the publishers of the Archives.

10. What is the largest river in the United States?
11. Why did the Pilgrims come to this country?
12. For how many years is the President of the United States elected?
13. What three things do most plants need in order to live?
14. How does the beating of your heart keep you alive?
15. How can the banks afford to pay interest on the money you deposit?
16. Name five insects.
17. What is a civil war?
18. Name five cities in the United States with a population of over half a million.
19. How is it that newspapers can be sold for less than the cost of printing?
20. What is the freezing point of water?
21. What is the usual economic result of the overproduction of any commodity?
22. What are the functions of the three branches of our government? (In three words or phrases.)
23. Name four general reasons that will prevent a would-be immigrant from entering the United States.
24. What is the function of respiration?
25. What is a referendum in government?

SCALING INFORMATION B

In the course of our investigation, it became necessary to make a test for rural children as Information A had been constructed for urban children. As far as we know, there are no precedents for this. It has always been taken for granted that tests scaled and standardized on white city children should be made the basis of comparison with other groups, but seldom indeed have the tables been turned. . . .

Construction.—A preliminary test of 80 questions was compiled from material submitted by rural teachers. Thirty-seven questions were identical with questions in the preliminary A test. As in the case of the former test, the author framed all the questions and included none that appeared to be merely local in significance, or highly specialized. These questions were given to all the children in an entire rural district. This covered 52 schools and included 416 children from the 4th–12th grades. It must be remembered that rural schools consist, in great part, of one-room schools, averaging 10–25 pupils from all grades.

SCALED INFORMATION TEST B

1. Of what is butter made?
2. How much does it cost to mail a letter to any city in the United States?
3. What are the four seasons?
4. What is our national song?
5. Name a vegetable that grows above ground.
6. Name the young of sheep, cow, horse.
7. What do we mix with ice to help us freeze ice cream more quickly?
8. Name *four* different trees.
9. From what animal do we get mutton?
10. Why does seasoned wood burn more easily than green wood?
11. Name *five* crops.
12. What tree doesn't shed its leaves in the fall?
13. Tell one way of finding out the age of a tree.
14. Why don't we see the stars in the daytime?
15. About how often do we have a full moon?
16. Name *five* wild flowers.
17. What is the economic value of Alaska to the United States?
18. Why does frost form on the *inside* of the window pane?
19. Name *three* uses of a forest.
20. Who was the President of the United States during the World War?
21. Give one reason for the rotation of crops.
22. Name *three* different plants from which sugar is made.
23. In what month of the year do the days begin to grow shorter?
24. Why is the moon light at night?
25. How can you locate the Pole star? . . .

Name .....
.....
School .....
.....
Age: Yrs..... Mos.....
Grade .....

Information A was found to be highly discriminative for age and grade. The sigmas of the difference averaged 5.5 for age and 8.0 for grade.

Information B was found to be highly discriminative for age and grade up to age 15. An explanation for the apparent discrepancy at the upper ages is offered in the text.

The distribution of scores was found to resemble closely that of the curve of normal probability. . . .

The 4,875 rural children who acted as subjects in our final B test were recruited from eight districts as shown on the map in Chapter III [Omitted]. In all, approximately 300 schools, one-room and

union, were reached. This included 2,330 children in one-room schools, 1,808 from union schools, and 737 unclassified. . . .

The rural schools were classified into one-room and union schools. The former represents the "typically" rural schools in outlying districts. The latter represents the consolidated schools serving five or more districts.

No reliable or consistent differences were found between the eight districts tested.

The union schools were found, in our study, to be fairly consistently (although not entirely reliably) superior to the one-room schools up to the 7th grade. Selection of cases above this grade in the one-room schools (and confirmatory evidence thereof) was offered as an explanation of the apparent change at the upper levels. . . .

RURAL AND URBAN DIFFERENCES ON INFORMATION TESTS A AND B

Comparison of Rural (District I) and Urban Groups on Information A

GRADES	RURAL			URBAN			DIFFERENCE IN σ UNITS	CHANCES THAT TRUE DIFFERENCE IS ABOVE 0
	Number of Cases	Average	σ*	Number of Cases	Average	σ*		
4	127	36.3	6.8	970	40.7	9.0	6.5	100 in 100
5	125	44.6	7.3	988	47.8	9.0	4.5	100 in 100
6	116	50.1	6.3	955	50.2	9.0	.2	58.0 in 100
7	96	53.3	5.5	932	54.7	8.1	2.3	98.9 in 100
8	89	59.3	7.0	822	58.6	7.9	—.9	82.0 in 100
							(favor urban)	(favor rural)

Comparison between One-Room and Urban (3 Schools) Averages

GRADE	SEX	RURAL		URBAN		DIFFERENCE IN σ UNITS	CHANCES THAT TRUE DIFFERENCE IS ABOVE 0
		Average	σ*	Average	σ*		
4	Boys	11.02	4.1	8.74	3.9	5.56	100 in 100
	Girls	10.32	3.8	7.94	2.9	7.21	100 in 100
5	Boys	14.24	3.1	10.42	4.0	9.10	100 in 100
	Girls	13.36	3.6	9.44	3.8	9.33	100 in 100
6	Boys	16.32	3.4	13.46	4.0	7.33	100 in 100
	Girls	15.42	2.0	11.72	3.8	9.25	100 in 100
7	Boys	17.76	3.2	13.84	3.6	8.52	100 in 100
	Girls	17.42	2.9	13.38	3.6	8.78	100 in 100

* Standard deviation.

The importance of data about rural children is evident when we realize that in 1924 there were 10 million children enrolled in rural schools.

The bulk of evidence from previous studies points to the conclusion that rural children are inferior to urban children mentally and scholastically.

We have offered the hypothesis that this difference is due not to any innate intellectual difference between the two groups, but to the tools used in measuring them.

To obviate this difficulty our Information Test B was scaled on rural children just as our Test A was scaled on urban children. Each test was administered to both groups of children.

On Information A the rural group was found to be about a year retarded in comparison with the urban group.

On Information B, the situation was entirely reversed. A perfectly reliable difference $\left(\frac{\text{Difference}}{\text{Sigma}} \text{ ranging from } 5.56 \text{ to } 9.33\right)$ was found between the performances of the urban and rural groups.

A handful of other investigators have come to conclusions that may be compared with ours—notably Baldwin and Fillmore in their very comprehensive study.

Analysis of urban and rural answers on Test B, and of overlapping questions in preliminary tests A and B, points to the conclusion that Test B is no more specialized in favor of rural children than Test A (or any standard test) is specialized in favor of the urban children.

From the same analysis we produced evidence that questions "fair" to a certain group cannot be selected a priori. This was also affirmed by submitting our questions to 14 rural superintendents who, despite their unusually rich experience, were unable to designate correctly (in a fairly large percentage of the cases) which questions favored the rural children.

An analysis of current standard group tests shows that a large part of the material required is informational in character. So, our results may be said to have some application outside the narrow sphere of individual information tests.

Through the entire rather involved chapter, we have attempted to follow the thread of this inquiry: "Are the mental differences found between urban and rural groups a function of an innate intellectual difference or of the tools of measurement?" Our results seem to point to the second explanation as possible and indeed probable.

177. Yenjiro Awaji: Occupation and Intelligence *

We may classify the subject of our tests in seven occupational groups, according to the occupation that they pursued before entering the army. These men had been employed in these occupations for two or three years, and were skilled in and well acquainted with them.

There is considerable difference in the numbers in each of the occupational groups. Agriculture leads with 2,270, while the professional group with 89 has the smallest representation.

These seven occupational groups, or, more specifically, the subjects from these seven occupational groups, showed considerable variation in the total intelligence test scores. Undoubtedly this variation represents occupational differences in the level of intelligence. The table presents these results clearly.

Occupation and Intelligence (Total Scores)

Occupations	Number of Subjects	Mean Score	Quartiles		
			Q_1	Q_2	Q_3
Professions	89	+4.573	+1.167	+4.833	+7.778
Secretaries	312	+4.416	+0.131	+4.633	+8.625
Trade	499	+3.046	−0.925	+2.993	+7.396
Skilled	1,036	+1.939	−2.588	+1.436	+6.853
Semiskilled	90	+0.511	−3.469	0.000	+4.292
Agricultural labor	2,270	−0.673	−4.671	0.000	+3.606
Manual labor	135	−2.074	−7.300	−1.286	+2.687
Total	4,633	+0.670	−3.735	+0.505	+5.422

It is evident that professionals are first in intelligence, those engaged in secretarial work are second, and manual laborers are lowest. The groups having more than average intelligence include the professions and those engaged in secretarial work, trade, and skilled occupations. The semiskilled labor and agricultural groups are of average intelligence, while manual laborers are below the average. . . .

* From Yenjiro Awaji, "Intelligenzprüfung im japanischen Heere," *Zeitschrift für angewandte Psychologie,* XXX, 97–101 (1928). Reprinted with the permission of the editors, Dr. William Stern and Dr. Otto Lipmann, and the publisher, Johann Ambrosius Barth. This study presents the data of an intelligence test given to 4,633 common soldiers in the Japanese army in September, 1924. The author states that this intelligence test differs from those used in the American army in that he is attempting simply to measure capacities rather than to make a classification of the men for army purposes.

In the professional group we have included teachers, priests, scholars, doctors, engineers, authors, journalists, and so on. . . . It is quite clear that these occupations in general require the highest level of intelligence, a fact readily seen in the table.

The group of secretarial workers includes also officials in government offices, state or community officials, employes of banks and other commercial institutions, and so on. . . .

The group engaged in trade is very similar to that in secretarial work. It includes commercial clerks, tradesmen, salespeople, and others who are engaged directly or indirectly in selling goods. . . .

Skilled labor includes the technical occupations that require a certain amount of technical knowledge and skill; it involves mechanics, steam fitters, machinists, turners, chauffeurs, locomotive engineers, telegraph operators, chemical workers, watchmakers, electrical technicians, draughtsmen, architects, and photographers. . . .

The semiskilled occupations include those trades in which work is done only by hand, or, at best, with tools or very simple instruments. Carpenters, cabinetmakers, masons, cobblers, tailors, printers, bookbinders, barbers, blacksmiths, painters, and others are included in this group. . . .

Agriculture includes those men engaged in farming, cattle-raising, forestry, and all other occupations directed in general towards the securing of raw products. . . . It is very remarkable that the range for this group is comparatively small, despite the large number of persons (2,270) included in it.

Manual labor would really mean that physical labor which is offered for wages. But we shall take it to include all those occupations—except agriculture—which are carried on chiefly by means of physical labor. Thus we include not only porters, men who draw wagons, coachmen, stevedores, common laborers, railroad workers, locomotive firemen, low-grade factory workers, janitors, firemen, building workers, street-sweepers, and so on, but also miners, fishermen, and sailors. . . .

From the results mentioned above, the two following facts appear clearly: 1. There are considerable differences between the levels of intelligence of different occupational groups. . . . 2. The members of different occupational groups are actually not distributed rationally, according to their native intelligence. In the most intellectual occupations, such as the professions or secretarial work, we find persons who have a very meager stock of intelligence. On the other hand, purely physical labor, like manual labor and agriculture, claims a not inconsiderable number of gifted persons who could better be employed at mental tasks.

178. James F. Duff and Godfrey H. Thomson: The Social and Geographical Distribution of Intelligence in Northumberland *

SOCIAL DISTRIBUTION

On February 24th, 1922, an intelligence test [1] was taken by all the children attending elementary schools in Northumberland (excluding Newcastle and Tynemouth) who were over 11 years and under 13 years of age on the 1st day of March, following. It was also taken by most secondary school pupils of those ages. Results were obtained from 13,220 children in elementary schools, and 405 children in secondary schools. In view of the large numbers concerned the results have been grouped under eight classes, instead of giving the exact intelligence quotient for each child. These classes were as follows:

Class *IQ*	Girls	Boys
A+=140 or over	4	12
A =130 to 139	49	80
B+=120 to 129	318	414
B =110 to 119	1,146	1,129
C+=100 to 109	1,765	1,833
C−= 90 to 99	1,779	1,757
D = 80 to 89	991	981
D−=Below 80	622	715
Spoiled papers, etc.	21	9
	6,695	6,930

Teachers were asked to state the occupation of every child's parent; but in 176 cases this information was either not given at all or was obscure. Omitting these, as well as the 30 spoiled papers, there remain 13,419 children, who are here grouped together according to their parent's occupation, the average intelligence quotient of each class being shown. The relation established between occupation and intelligence is of course not direct; the occupation is the parent's, the intelligence is the child's; and "intelligence" must only be taken to mean those particular qualities which were measured by this particular intelligence test.

As far as possible, the occupations have been grouped to show differences of social standing, of skill, and of responsibility. . . .

* *British Journal of Psychology*, XIV, 192–198 (October, 1923).

[1] No. 2. Northumberland Mental Test (Harraps), somewhat similar to that described in this *Journal*, Vol. XIII, Part III (December, 1921), but rather more difficult.

If occupations more or less similar in standing are grouped together, the following result is obtained:

Occupational Class	Total	Average *IQ*
Professional	137	112.2
Managers	92	110.0
Higher commercial class	368	109.3
Army, navy, police, postmen	129	105.5
Shopkeeping class	748	105.0
Engineers	571	102.9
Foremen	256	102.7
Building trades	717	102.0
Metal workers, shipbuilders	820	100.9
Miscellaneous industrial workers	472	100.6
Miners, quarrymen, excluding managers, foremen	5,968	97.6
Agriculture, all classes	1,128	97.6
Low-grade occupations, laborers	1,214	96.0

GEOGRAPHICAL DISTRIBUTION

The conclusion which one of us drew tentatively in 1921 about the geographical distribution of intelligence quotients was as follows: "The distribution of intelligence suggested by the tests is such that the highest ability appears to be found *close to* the cities and *far away* from the cities, the intermediate areas having fewer cases of high ability, as though they were drained by selection." It was added that this must be accepted "only with the greatest caution." (This *Journal,* 1921, XII, 222.)

This year there has been much better opportunity of comparing districts since *all* the children of certain ages were presented for the test. The figures for *elementary* schools are as [given on the following page].

Bearing in mind the possible sampling errors of these numbers, it will be seen that although a superiority of the towns is evident, it is only well marked in Monkseaton and (to a less extent) Gosforth. Gosforth is a residential suburb close to Newcastle, Monkseaton another such district on the coast a few miles away, with an express electric service to town. Monkseaton elementary schools have, especially in certain cases, a very high reputation.

The coal field is low in the frequency of classes A and A+; and both in this and in the average the most rural region (4) is quite as good as the whole (mainly urban) district of Tyneside, excluding Newcastle. Looking at the numbers broadly, they still seem to lend

District (Elementary Schools Only)	Cases	Frequency of Classes A+ and A	Percentage of Cases over *IQ* of 99
1. Tyneside from Hexham inclusive to the sea, including Gosforth and Whitley, but excluding Newcastle and Tynemouth	4,431	1 in 96	48
Whitley and Monkseaton	(395)	1 in 30	67
Gosforth	(324)	1 in 108	57
2. Seacoast, excluding Blyth, Whitley, Monkseaton, and Berwick	707	1 in 101	42
Blyth	1,173	1 in 147	53
Berwick	380	1 in 95	52
3. Coal field, defined as the district south of the Coquet, and between the 250-foot contour line and the sea, excluding the areas given above	4,614	1 in 231	48
4. The rest of the county, mainly composed of the Belford and Ottercap moors, the valleys of the Till, upper Coquet, Rede, North Tyne, South Tyne, upper Derwent	1,798	1 in 95	49
Total	13,103*		

* Certain schools were omitted in this table for various reasons.

some support to the hypothesis that the superiority of the residential suburbs is due to selection, by the operation of the social ladder, from the surrounding districts; and that this has not affected the more remote districts so much as the coal field.

179. Hector MacDonald: The Social Distribution of Intelligence in the Isle of Wight *

This paper is founded on the results of a group intelligence test [1] held in the elementary schools of the Isle of Wight on 2 February, 1925. Intelligence quotients were obtained in the case of 2,047 children, who would be between the ages of 11 years and 13 years on 1 August, 1925, and these have been grouped in six classes, as follows:

* *British Journal of Psychology*, XVI, 123–129 (October, 1925).

[1] The test was standardized by Professor Godfrey Thomson and was comparable in difficulty with that held in Northumberland on February 24, 1922, described in a paper in this *Journal*, XIV, 192 (1923), to which this forms an addition. [Thomson's paper is summarized on page 274.]

IQ	Cases
120 or over	101
110 to 119	275
100 to 109	626
90 to 99	519
80 to 89	358
Below 80	168
	2,047

. . . The 2,047 children were grouped according to their parents' occupation, the average *IQ* of each class being shown. It is to be expected that a parent's status or occupation will be reflected in some measure in the child's intelligence, although this connection is not direct, as the occupation is the parent's and the intelligence is the child's. By "intelligence" we mean those particular qualities measured by this particular intelligence test, which, like all group tests involving reading, undoubtedly measured "schooling" to a considerable extent, as well as native intelligence.

Following the classification of Mr. J. F. Duff, who was responsible for the Northumberland list mentioned above, we have grouped the occupations as far as possible to show differences of social standing, of responsibility, and of skill. . . .

The average *IQ* has been reckoned by taking each class letter at its middle value, thus placing 75 as the lowest possible value and 125 as the highest. This procedure, while accurate enough for the middle classes, will tend to depress the apparent intelligence of a clever group (many of whom would be much above 125), or inflate that of a dull group. It would therefore, in so far as it is inaccurate, tend to a conservative estimate of any class differences which may be present.

The average *IQ* thus calculated for the 2,047 children is 98.2. The average *IQ* of each (classified) group is given in the following table:

Intelligence of 11- to 13-Year-Old Children and the Occupation of Male Parent

(Data from the Study of Hector MacDonald on the Isle of Wight)

Occupational Class	Number of Cases	Average *IQ*
Managers	21	108.7
Professional	8	106.6
Higher commercial	83	103.3
Foremen	17	103.1
Engineers	111	100.8

INTELLIGENCE OF 11- TO 13-YEAR-OLD CHILDREN AND THE OCCUPATION OF MALE PARENT—*Continued*

OCCUPATIONAL CLASS	NUMBER OF CASES	AVERAGE *IQ*
Shopkeepers	224	100.7
Army, navy, police, and postmen	141	99.9
Metal workers (including shipbuilders)	123	99.3
Building trades	207	99.1
Miscellaneous industries	201	99.1
Miners and quarrymen	6	97.9
Seamen and boatmen	60	97.4
Agriculture (all classes)*	277	96.7
Low-grade occupations, laborers†	328	96.0

* This class consists of farm foremen and bailiffs, 108.8; dairy farmers, 101.1; gardeners, 99.3; groundmen, park-keepers, etc., 98.3; farmers (general), 98.2; shepherds, 95.5; coachmen and grooms, 93.8; farm laborers and carters, 93.8; cowmen, 92.8; estate workers, 89.6; estate workers (unemployed), 88.8. (The figures are the average *IQ*'s for the subgroups.)

† This class consists of laundresses and charwomen, 98.7; corporation workers, 98.6; builders, brickyard and quarry laborers, 97.2; stokers and boilermen, 97.1; semiskilled workmen, 96.5; general laborers, 96.1; dock laborers, 94.7; window cleaners and bill posters, 93.9; hawkers, sweeps, and street musicians, 93.3; gravel diggers, 85.8; coal heavers, 81.9. (The figures are the average *IQ*'s for the subgroups.)

SUBANALYSIS OF AGRICULTURE

OCCUPATIONAL CLASS	AVERAGE *IQ*
Shepherds	99.1
Farm foreman	98.5
Farmers	98.4
Farm laborers	94.3
Cattlemen	92.7

180. ROBERT SASSENHAGEN: THE MENTAL PERFORMANCE OF RURAL AND URBAN CHILDREN *

A. GENERAL MENTAL STRUCTURE OF THE RURAL CHILD

It is inevitable that the characteristics of the type "rural child," which we have atttempted to delineate, refer to formal abilities, on account of the nature of the tests used. The development of rural children is largely conditioned by the nature of the imagery that they have been

* From Robert Sassenhagen, "Ueber geistige Leistungen des Landkindes und des Stadtkindes," Supplement No. 37 to the *Zeitschrift für angewandte Psychologie,* 1926, pp. 144–148. Translated and printed with the permission of the author, the editors, Dr. William Stern and Dr. Otto Lipmann, and the publisher, Johann Ambrosius Barth.

This study presents the results of tests given by the author to 561 children in twenty

able to build up. But the relatively constant environment of rural residents sets limits to the enrichment of the imagination. The imagination of the rural elementary pupil is perhaps not much inferior to that of the urban elementary pupil, but it is certainly of an entirely different nature. The impressions that impinge again and again upon the rural child come to be a treasure that he cannot lose. They are clear and definite. This fact is apparent in school tasks that take their material from the field of experience of the village pupil. The rural child does less well when the task extends into a field far from that of rural life. . . . In constructing its pictures the imagination is dependent upon the available images that have been stored up. Therefore, we may not expect any outstanding imaginative powers among rural children. The store of firmly based views that they have undoubtedly acquired through most intimate and lasting contact with nature seems to inhibit rather than to facilitate the developing power of imagination. The simple, naïve nature of the rural child is firmly anchored in reality, a fact that prevents the too frequent building of air castles. In addition, the rural child is characterized by a decided mental awkwardness that stands in marked contrast to the versatility and agility of the urban child. The rural child also lacks the linguistic ability necessary to express the complexes of images that he is constantly forming. An examination of the ability to interpret facial expressions and postures, as presented in a picture—an ability which is related to imagination—is calculated to come nearer to the point of development that the rural child has reached. But the discussions of this ability that are presented in the text are to be taken with great caution, since both the age of puberty and familiarity with the material have considerable influence on this ability. Accordingly, the developmental process, which manifests itself in the gradual differentiation of the general stream of experience according to his own and the other ego, has progressed less in rural children than in the children of the higher and intermediate schools. The elementary pupils in the city, on the other hand, are on about the same plane as those of the country. The question

schools in Pomerania: 151 of these children came from higher schools, 137 from elementary schools, 123 from urban elementary schools (*Volksschulen*), and 150 from rural elementary schools. The age distribution of these children was:

Age	Boys	Girls	Total
12 years 0 months to 12 years 11 months.....	86	44	130
13 years 0 months to 14 years 0 months.....	142	134	276
14 years 1 month to 15 years 0 months.....	90	65	155
Total	318	243	561

of the stage of development of the different school groups can be clarified by determining the logical abilities that are developed primarily in connection with school work. In a previous discussion it was found that a relatively large percentage of the rural children were still in the action stage, which, according to earlier investigations, was considered to end at about the twelfth year. Other less able types of performance were also represented, primarily among the elementary school children of the country. We may grant that subjects of the same age, but coming from different population groups, show great differences in performance. But we may not conclude that the group that was inferior in performance is necessarily of lower native intelligence. It is necessary to take into account the possibility of retarded development. I refer especially to the relation of the ability to think. The ratios of the mean scores on this test were 4 : 5 : 5 : 6 for pupils in elementary schools of the country and of the city, pupils in intermediate schools, and in higher schools, respectively.* This expresses most clearly the chief difference between the mental pattern (*Struktur*) of the rural children and that of the children from other school groups. . . .

The performance of pupils in different schools on each series of the three-word test bears the following relationship to each other.†

a) Philanthropist—ungrateful man—police.

8.5 (H) : 6.5 (M) : 5.5 (V. St.) : 4 (V. Ld.)

b) Good crops—lazy peasant—despair.

6 (H) : 4.5 (M) : 4.5 (V. St.) : 4 (V. Ld.)

c) Soldiers in camp—starless night—great confusion.

6 (H) : 5 (M) : 5 (V. St.) : 4 (V. Ld.)

* Editors' Note.—The test of logical capacities referred to is the so-called "three word test." Three key words are presented to the subject and he is asked to combine them into a sentence or a short story. The author used three sets of such key words, "Good crops—lazy farmer—despair," "Philanthropist—ungrateful man—police," "Soldiers in camp—starless night—great confusion." These were chosen because it seemed that the first drew upon the experience of the rural child, the second upon that of the urban child, and the third upon experiences common to both, since children of both environments probably had had contacts with returned soldiers. The results were scored numerically on a scale constructed by the author. This ranged from 0 to 6 and made the use of fractional subdivisions possible. An especially ingenious and striking combination was scored 5–6, a correct normal one 4, and so on. Failure to make any combination or an entirely meaningless combination received a score of 0. Additional scores were provided for making two or more combinations. Since the numerical scores assigned are of value only with reference to the scale on which they were assigned, the author presents the ratios that the mean scores of the different groups bear to each other.

† Editors' Note.—The figures presented are the ratios that the mean scores of the groups bear to each other. In these tables the following abbreviations are used: H for higher schools; M for intermediate schools; V. St. for elementary urban schools; and V. Ld. for elementary rural schools.

The ratios for different types of performance with the third series are shown in the table below.

Type of Performance	H	M	V. St.	V. Ld.
a) Especially good and correct solutions	4.5	3.0	3.0	2.0
b) Inferior performance	1.0	1.29	1.33	1.4
c) Purely verbal connection	1.0	2.2	3.4	3.0
d) Separate treatment of each of the three concepts	0.0	1.0	0.0	1.3
e) Good connection of two concepts	1.15	1.0	0.23	1.0
f) Meaningless connections or attempts at solutions	0.0	1.0	1.16	2.33
g) Complete failures	1.0	9.0	4.0	10.0

. . . The ratios of the mean scores for critical ability * of pupils from the different schools are 7.5 : 6.5 : 5.5 : 4 for high schools, intermediate schools, and elementary urban and rural schools, respectively.

181. Carle C. Zimmerman, Pitirim A. Sorokin, and Charles J. Galpin: Comparative Rural-Urban Productivity of Men of Genius

The table below summarizes the chief studies of the rural-urban contributions to the élite and men of genius. The important results are given in the table and the references in the footnotes.

A Summary of Comparisons of Rural-Urban Intelligence Based on Data as to the Origin of Distinguished Persons

Blanket Comparisons

Author	Study	Conclusions
Pitirim A. Sorokin and Carle C. Zimmerman, with I. O. Adams, O. W. Behrens, O. D. Duncan, Dan Dvora-	Origin of 2,171 of most prominent agricultural leaders listed in RUS for 1925. This is a seminar study at the University of Minnesota.	Only 15 per cent were born and 9.5 per cent were reared in cities, whereas 64 per cent were born and 67 per cent were reared on farms. This is more than the percentage the farm population was of

* Editors' Note.—This test consisted of a selection containing inconsistencies and absurdities that the pupil was to spot and record. The selection began about as follows: "On a pleasant day in March our class went for a day's outing. *Despite* the fact that it had rained all the night before, the roads were wet and muddy in the morning, but that did not disturb our enthusiasm. We came through woods in which all the trees were pines. Unfortunately the trees were entirely *bare;* it must be beautiful here in the summer when the trees are covered with *leaves.*" The scoring was done by means of a scale devised by the author. Again only the ratios of the mean scores are presented.

BLANKET COMPARISONS—*Continued*

AUTHOR	STUDY	CONCLUSIONS
cek, Fred C. Frey, and Elmo H. Lott.[1]		the total population. Agricultural Experiment Stations and public institutions that produce and consume such leaders affect the numbers.
Alfred Odin.[2]	Origin of 6,382 distinguished Frenchmen (1300–1830) and corroborative figures for distinguished men of Italy, Spain, England, and Germany.	French cities produced 77 distinguished literary men and rural districts only 6 per 100,000 population or a ratio of 1: 13. Only 11 per cent of all in the four other countries were born in the homes of persons who did manual work (*main-d'ouevre*).
Lester F. Ward.[3]	Tables of Alfred Odin reanalyzed.	Urban difference is due to environment. (This is in agreement with Odin.)
A. H. Yoder.[4]	50 great men of history: 22 from Great Britain, 15 from the United States, and 13 from the Continent.	Information as to the occupation of the parent is meager. A majority lived in small towns and cities where advantages of city and country were combined.
George R. Davies.[5]	Men in *Who's Who in America* and results of some other studies. Correlated with density (percentage of urbanization) per square mile.	Secured gross positive coefficients ranging from .60 to .89. Small towns near large cities were most productive, large cities next, and isolated rural communities least.

[1] Pitirim A. Sorokin and Carle C. Zimmerman, with I. O. Adams, O. W. Behrens, O. D. Duncan, Dan Dvoracek, Fred C. Frey, and Elmo H. Lott, "Farmer Leaders in the United States of America," *Social Forces,* VII (September, 1928).

[2] Alfred Odin, *Genèse des grands hommes, gens de lettres français modernes,* Vol. II, Lausanne, 1895.

[3] Lester F. Ward, *Applied Sociology: A Treatise on the Conscious Improvement of Society by Society,* New York, 1906, pp. 135–233.

[4] A. H. Yoder, "The Study of the Boyhood of Great Men," *Pedagogical Seminary,* III, 134–156 (October, 1894).

[5] George R. Davies, "A Statistical Study in the Influence of Environment," *Quarterly Journal of the University of North Dakota,* IV, 212–236 (April, 1914).

BLANKET COMPARISONS—*Continued*

AUTHOR	STUDY	CONCLUSIONS
Scott Nearing.[6]	Birthplaces of 18,794 persons included in *Who's Who in America,* 1912–1913.	A larger percentage of eminent persons was born in cities in proportion to the number in the total population. There is no absolute correlation between urbanization and eminence of the population. The center of origin of eminent people was shifting westward.
Cesare Lombroso.[7]	Italian musicians and painters.	Large cities had largest number of musicians and painters. Smaller cities were next and rural districts were last.
Paul Jacoby.[8]	Origin of 3,311 distinguished French persons born between 1700 and 1800 and dead in 1845, from lists of *Biographie Universelle.*	Density of the population and urban percentage had a high positive correlation with relative frequency of eminent persons. Twenty-nine per million became distinguished in departments 17 per cent urban; 271 in every million in departments 49 per cent urban.
Ellsworth Huntington.[9]	A sample of 2,000 from the 1924–1925 *Who's Who* compared according to place of birth.	Rural districts produced 48, small cities 107, and large cities 90 per 100,000 population. More educational and religious leaders came from rural districts and more lead-

[6] Scott Nearing, "The Geographical Distribution of American Genius," *Popular Science Monthly,* LXXXV, 189–199 (August, 1914).

[7] Cesare Lombroso, *The Man of Genius,* London, 1891, Part II, chap. v.

[8] Paul Jacoby, *Études sur la sélection dans ses rapports avec l'hérédité chez l'homme,* 2d ed., Paris, 1904, pp. 542 ff.

[9] Ellsworth Huntington, "The Sifting Power of Cities," *Scribner's Magazine,* LXXX, 316–324 (September, 1926), and *The Pulse of Progress,* chaps. i–xlv.

BLANKET COMPARISONS—*Concluded*

AUTHOR	STUDY	CONCLUSIONS
		ers in music, engineering, business, and art came from cities. This cityward migration of the more able was connected with the flowering and fall of civilization.
R. Clyde White.[10]	Origin of men in English *Who's Who* for 1920 (only those born between 1851–1881) and in addition, 1,297 biographies from American *Who's Who* for 1922–1923.	In both countries the city produced more eminent persons. In England between 1871–1880 the number was about equal. In America the same trend was observed.
W. J. Spillman.[11]	Presidents of the United States; senators in 1909; governors, 1909; cabinet officers 1869–1903; 47 railway presidents; members of the House of Representatives, 1909.	88 per cent of presidents, governors, and cabinet officers, and 70 per cent of the members of the Senate, were born either in the country or in villages; 69.4 per cent of all groups together were rural born. In 1880, 83.9 per cent of the population was in towns having less than 4,000 population.
Frederick A. Woods.[12]	Data of distribution of persons in *Who's Who,* about 1908, and census figures on rural and urban distribution of population.	Twenty-seven to 35 per cent were born in cities, whereas in 1860 only 16.1 per cent of the population lived in cities. Cities selected the brighter from the country; genius is hereditary.

[10] R. Clyde White, "The City-Drift of Population in Relation to Social Efficiency," *Journal of Social Forces,* II, 17–23 (November, 1923).

[11] W. J. Spillman, "The Country Boy," *Science,* N. S., XXX, 405–407 (September, 1909).

[12] Frederick A. Woods, "The Birthplaces of Leading Americans and the Question of Heredity," *Science,* N. S., XXX, 17–21 (July, 1909).

BLANKET AND DIFFERENTIATED COMPARISONS

AUTHOR	STUDY	CONCLUSIONS
Pitirim A. Sorokin and Guy C. Hanna, Celia Israel, Lewis L. McKibben, Mildred Parten, Marion B. Rothem, Mamie Tanquist, and Elmer N. Eddy.[13]	Origin of 1,160 American labor and radical leaders and 321 radical leaders in foreign countries from the *American Labor Who's Who,* 1925.	No real correlation between degree of urbanization or industrialization of areas and number of leaders born per population. Farmers, who in 1880 composed 24.6 per cent of the total occupational population of the United States, furnished 14.9 per cent of all leaders and 20.9 per cent of the highest class of leaders, compared with 9.4 of all leaders from unskilled and skilled laborers combined, who composed about 40 per cent of the total occupational population in the United States in 1880. Actually and relatively farmers furnish many more labor leaders than do laborers.
J. McKeen Cattell and Dean R. Brimhall.[14]	Comparison of origin of 1,000 leading scientists of America with census distribution of population.	A larger proportion of the scientists born on farms were of low distinction and a smaller proportion of high distinction. However, no home of a person engaged in domestic service or in day labor even of the higher grades produced an eminent scientist.
Pitirim A. Sorokin.[15]	Occupation of fathers of 248 living and 228	Farmers produced 18 of the 248 living and 56 of the 228

[13] Pitirim A. Sorokin and Guy C. Hanna, Celia Israel, Lewis L. McKibben, Mildred Parten, Marion B. Rothem, Mamie Tanquist, and Elmer N. Eddy, "Leaders of Labor and Radical Movements in the United States and Foreign Countries," *American Journal of Sociology,* XXXIII, 382 ff. (November, 1927).

[14] J. McKeen Cattell and Dean R. Brimhall, *American Men of Science; A Biographical Directory,* Garrison, New York, 3d ed., 1921; 2d ed., 1910.

[15] Pitirim A. Sorokin, "American Millionaires and Multi-Millionaires," *Journal of Social Forces,* III, 627–640 (May, 1925).

BLANKET AND DIFFERENTIATED COMPARISONS—*Concluded*

AUTHOR	STUDY	CONCLUSIONS
	dead American millionaires and rich men.	dead compared with 4 and 16 for the laboring (all) classes. Number furnished by laborers decreased fastest, in spite of increase of urbanization. Others came from upper classes.
Stephen S. Visher.[16]	18,356 persons in *Who's Who in America,* 1922–1923, according to place of birth and occupation of male parent.	Cities contributed relatively 6 times as many as the farms; villages, 9 times; and suburbs 11 times as many. Per 10,000 persons in farmer class, there were 9 notables; per 10,000 of the skilled and semiskilled laborers, 4 notables; and per 10,000 of the unskilled laborers only 0.013 notables.

DIFFERENTIATED COMPARISONS

AUTHOR	STUDY	CONCLUSIONS
Charles H. Cooley.[17]	Origin of 71 of the most prominent poets, philosophers, and historians of all times and countries.	24 came from the lower middle class and only 2 from the laboring class; farmers were not specified.
Alphonse de Candolle.[18]	412 foreign members of the Royal Society of London, Academy of Berlin, and Academy	7 per cent of foreign members of French Academy were farmers or laborers; 25 per cent of foreign members

[16] Stephen S. Visher, "A Study of the Type of the Place of Birth and of the Occupation of Fathers of Subjects of Sketches in *Who's Who in America*," *American Journal of Sociology,* XXX, 551 ff. (March, 1925). Published also in the University of Indiana Studies.

[17] Charles H. Cooley, "Genius, Fame, and the Comparison of Races," Annals of the American Academy of Political and Social Science, IX, 15 ff. (May, 1897).

[18] Alphonse de Candolle, *Histoire des sciences et des savants depuis deux siècles . . .* , 2d ed., Geneva, 1885.

DIFFERENTIATED COMPARISONS—*Continued*

AUTHOR	STUDY	CONCLUSIONS
	of Sciences of Paris between 1660 and 1882. In addition, 60 distinguished French savants.	of London and Berlin academies, 23 per cent of 60 distinguished French scientists were sons of workers or farmers. These were considerably lower than the rural proportions in the total population.
Jur. Philiptschenko.[19]	Comparison of contemporary Russian scholars, scientists, men of letters, and members of the Russian Academy of Science for the last 80 years.	Scholars came from agriculture in 7.9 and from laborers (all kinds) in 2.7 per cent of cases. Men of letters came from each class in 9.6 per cent of cases. Great contemporary scientists came from agriculture in 6 per cent and from laborers (all kinds) in 4 per cent. Members of the Academy of Science for 80 years came from agriculture in 14.1 and from laborers (including peasants) 3.5 per cent. All the rest came from the upper classes (about 85 per cent of contemporary Russia is rural).
Fritz Maas.[20]	4,421 (all) German notables born after 1700 and dead by 1910. There were 17 classes subdivided into artists, scientists or intellectuals, and practical men, such as military and industrial leaders.	Upper classes produced 83.2 per cent. In the lower classes, artisans produced 8.9, peasants 3.8, and laborers 0.3. Peasants, laborers, and artisans produced less than their populations were of the total German population. The rural aristocracy were classed among the upper groups. Those coming from peasant

[19] Data are from Pitirim A. Sorokin, *Social Mobility,* chap. xii.

[20] Fritz Maas, "Ueber die Herkunftsbedingungen der geistigen Führer," *Archiv für Sozialwissenschaft und Sozialpolitik,* XLI, 144–186 (September, 1915).

DIFFERENTIATED COMPARISONS—*Continued*

AUTHOR	STUDY	CONCLUSIONS
		families rose as scientists, artists, and scholars in two-thirds of the cases. Historically, the proportion from peasants is increasing and from the proletariat is decreasing, while that from artisans remains constant.
Edwin L. Clarke.[21]	Origin of 1,000 prominent American literati born before 1851.	Of 676 fathers, 328 were professional, 151 commercial, 139 agricultural, and 48 mechanical, clerical, and unskilled persons; 21 per cent, then, were farmers. During that period about 90 per cent of the United States population were rural (living in communities under 5,000).
Cora S. Castle.[22]	217 of the most eminent women, exclusive of royalty, since beginning of history, for whom facts as to origin could be secured.	5 were daughters of farmers; 4, of unskilled laborers; 29, of clergy; 22, of teachers; 22, of merchants; 21, of military officials; 19, of government officials; 16, of musicians; 8, of tradesmen; 7, of lawyers; and 4, of bankers.
Francis Galton.[23]	107 outstanding British men of science.	2 were sons of farmers; 1 of a laborer; 43 of business men; 18 of public officials; 34 of professional men; and 9 of nobility. One-fifth were born in villages or open country, half of the rest in towns, and the other half in cities.

[21] Edwin L. Clarke, *American Men of Letters, Their Nature and Nurture,* Columbia University Studies in History, Economics, and Public Law, LXXII, 74–76 (1916).

[22] Cora S. Castle, *Statistical Study of Eminent Women,* New York, 1913.

[23] Francis Galton, *English Men of Science, Their Nature and Nurture,* New York, 1875.

DIFFERENTIATED COMPARISONS—*Concluded*

AUTHOR	STUDY	CONCLUSIONS
Havelock Ellis.[24]	1,030 British men of intellectual ability who lived between 1101 and 1830. These were the leaders who built England.	6 per cent were sons of farmers or yeomen; 2.5 per cent, of artisans or laborers; 9.2 per cent, of craftsmen (similar to business class); 18.8 per cent of the commercial class; and the rest of officials, professionals, and upper classes. Landed gentry are included in the upper classes. Author believes his figures underestimate contribution of farmers, because data were lacking in a number of cases.
Frederick A. Woods.[25]	British Dictionary of Biography.	Sons of craftsmen, artisans, and unskilled labor furnished 11.7 per cent of the total up to 1800; 7.2 per cent 1820–1825; and 4.2 per cent 1825–1850. Farmers were not specified.
MaClean.[26]	British men of ability of 19th century.	Farmers were classified with tradesmen and artisans. The combined group furnished 15 per cent of the eminent men.

182. FRITZ GIESE: THE ENVIRONMENT OF NOTED PERSONS *

The birthplace of noted persons.—The differentiation into small city, large city, and country may be used in an attempt to discover the environment. . . . We begin with the simplest device, that of distributing the persons included in this study according to large city, small city, and country. The table presents the results clearly.

[24] Havelock Ellis, *A Study of British Genius*, London, 1904.

[25] Frederick A. Woods, "The Conification of Social Groups," *Eugenics, Genetics, and the Family*, 1921, I, 312–328.

[26] MaClean, *British Men of Ability of the Nineteenth Century*, quoted by Havelock Ellis, in *A Study of British Genius*. Original not located.

* From Fritz Giese, "Die öffentliche Persönlichkeit," Supplement No. 44 to the *Zeitschrift für angewandte Psychologie*, 1928, pp. 71–78, 87–92, 249. Translated and printed with the permission of the author, the editors, Dr. William Stern and Dr. Otto

SIZE OF THE BIRTHPLACE OF NOTED PERSONS *

FIELD OF ACTIVITY	PERCENTAGE BORN IN		
	LARGE CITY	SMALL CITY	COUNTRY
Painting	21.6	43.6	34.8
Sculpture	25.3	31.9	42.8
Architecture	14.5	51.3	34.2
Music	22.1	44.4	33.5
Literature	22.1	42.4	35.5
Theology	5.5	26.3	68.2
Law	9.9	45.4	44.7
Philosophy	15.1	30.7	54.2
Philology	12.5	42.6	44.9
Pedagogy	5.3	22.1	72.6
History	10.6	46.9	42.5
Mathematics	10.4	54.2	35.4
Political economy	16.4	42.2	41.4
Medicine	14.3	40.6	45.1
Cosmology	14.3	40.9	44.8
Chemistry	14.0	50.9	35.1
Physics	12.0	47.4	40.6
Mineralogy	13.2	47.9	38.9
Zoology	9.9	53.8	36.3
Botany	13.8	40.5	45.7
Agriculture	6.2	18.8	75.0
Construction	18.9	39.0	42.1
Smelting	10.0	60.0	30.0
Administration	6.9	44.7	48.4
Politics	10.9	39.7	49.4
Military affairs	6.7	47.4	45.9
Crafts	2.9	27.9	69.2
Commerce	6.9	58.4	34.7
Industry	6.7	51.1	42.2
Journalism	16.3	42.5	41.2
Geography (Exploration, etc.)	14.1	45.6	40.3
Organization	12.4	46.0	41.6

* EDITORS' NOTE.—"Large cities" were those of 100,000 and over, "small cities" those of less than 100,000, and "country" included villages and other agricultural communities.

Lipmann, and the publisher, Johann Ambrosius Barth. This is a study of the individuals listed in Vols. VI and VII, supplemented by information from Vol. VIII, of *Wer Ist's,* the German *Who's Who,* covering the years 1912–1922. Persons listed because of membership in noble families or because they were representatives at some court were excluded from this study. Thus a total of about 10,000 individuals from territory where German was spoken for whom the data were sufficiently complete, were included.

Let us examine, first of all, the individuals with a rural background. We are struck with the preponderance of those engaged in agriculture, theology, and pedagogy. Why do representatives of these fields so frequently come from the country? There are numerous reasons. In the case of agriculture it is obvious. In the case of pedagogy and theology the influence of teacher and preacher, who naturally lead gifted children into their own vocations, is undoubtedly important. In addition to this, these professions have been, and still are, regarded by the villagers as of high social rank. Also, various scholarships and grants in theology and pedagogy will have to be taken into account. In addition, it may be supposed that the country makes for a certain thoughtfulness and pleasure in meditation, both of which are of importance in theology, a theory which seems to be corroborated by the figures for philosophy.

Nevertheless it will be necessary to apply certain corrective factors by treating immediately the shares of the large city, small city, and country in the production of types F, P, and B_t.* It is interesting to note that in agriculture the persons of type F, the optimum, are somewhat more frequently of urban origin, but all those of type P, and especially B_t, are of rural origin. This is remarkable and indicates that the more progressive farmers possess an urban background. Similarly, we find that the theologians of types B_t and P are of rural origin, while those of type F come from city and country in equal proportions. Among pedagogues and philosophers, on the other hand, all types, including type F, come from the country more frequently than from the city. . . . This is rather significant, especially when compared with the number coming from the small city, which might theoretically be regarded as the more likely source.

. . . The mean percentage contributions of large city and country, respectively, for all fields of activity are: type F, 10.4 per cent and 6.6 per cent; type P, 33 per cent and 26 per cent; and type B_t, 11.9 per cent and 11.8 per cent. The country is thus of especial importance for types P and B_t, in the latter case making contributions equal to those

* Editors' Note.—The author attempted to make a functional classification of the persons included in this study by dividing them into types B_t, P, and F. Type B_t includes those persons who have risen in their occupation because they have proved themselves especially capable in that field. Type P includes those individuals who have made a new contribution in their field of effort, enriching or widening the scope of that field. Type F includes those free creative individuals who make their contributions irrespective of the occupation in which they may happen to be engaged. Thus a teacher who receives promotion for efficient work and finally rises to the top of his profession is classified as type B_t. If he becomes noted for the introduction of a new method of didactics he is classified as type P. If he remains a pedagogue but becomes noted as a physicist he is classified as type F. Similarly a composer would be included in type F even though he might also be a music teacher.

of the city. . . . The situation is somewhat different when we consider only the foremost persons, as they come largely from small and large cities.

The internal difference between city and country in regard to certain fields of activity is extremely important. The figures for small cities are noteworthy; they may be combined and summarized in the table below.

Field of Activity	(City + Country = 100 Per Cent)					
	Country			All Cities		
	B_t	P	F	B_t	P	F
Art	26.4	37.3	36.4	73.6	62.7	63.6
Mental sciences	62.1	50.5	49.3	37.8	49.4	50.6
Natural sciences	61.4	43.3	44.0	38.5	56.7	56.0
Technology	36.0	39.2	50.0	64.0	60.8	50.0
Practical life	46.3	44.0	40.1	53.7	56.0	59.8

From this table we see that artists in all classes are predominantly of urban origin. The city predominates in all the chief fields in the production of type F, but not in the production of types B_t and P in all fields. In the mental and natural sciences the country furnished more of type B_t; and in the mental sciences alone it also produced more of type P. This relationship is reversed in the case of the natural sciences. In technology city and country produce equal proportions of type F, but the city furnishes more of types B_t and P. Just as in the case of art the city furnishes the greater proportion of persons in practical life. Summarizing, the city, in general, predominates, especially in art and practical life, and always in furnishing men of the highest qualities. . . .

We find that the chief contributions of the small city are indicated by the percentages for mathematics, zoology, smelting, commerce, and industry. This is not surprising, for frequently such persons remain in the town of their birth. Our heavy [metal] industries and our commerce have been centered primarily in smaller cities, especially during that period of the last century during which most of the persons discussed here were born. In regard to quality we find here that the smaller cities furnished the larger share of both type P and type B_t mathematicians—there were no type F mathematicians. However, their contribution to type P was greater (54 per cent compared with 35 per cent for type P, and 10 per cent as compared with 1 per cent for type B_t). . . . Nearly 51 per cent of the chemists came from small

towns, but according to another computation, chemists of type F came from the city almost three times as frequently as from the country. All type F zoologists were born in the city; those who came from the country were all of type P. . . . Type F merchants were born in the city; so also were those of type P, but as we see, these came from the small, rather than from the large city. Type F industrialists came from the country slightly more frequently (5.6 per cent as compared with 4.4 per cent); those who came from small cities were of types P and B_t, and evidently still resided in the place of their birth. The small city contributed least to agriculture, which can hardly cause astonishment, to pedagogy, and industry. The open country furnished more pedagogues of each type than it did theologians. In the crafts, type F was missing entirely, while the country furnished a larger share of type P (5.8 per cent as compared with 2.9 per cent from the small city) and type B_t (63.2 per cent as compared with 27.9 per cent). This result was not entirely to be expected, and it may be possible that opportunities of employment in the village, and the fundamentally nonacademic training are responsible for this condition. There is practically no tradition of craftsmanship (*Gewerbkultur*) in the village. The gifted villager does not wish to enter agriculture; he studies only to become a preacher or a teacher, or, less frequently, a physician. But when he enters the latter profession he belongs to type F. Otherwise he turns to a craft, which is the nonagricultural economic activity to which he can adapt most readily because of his early training.

All figures for the large city are smaller than those for the small city or the country, although some cities have equaled or exceeded provinces or even entire countries in number of population. Certainly the small city is more favorable territory than the large city. Which fields does the large city supply? First of all we find art. . . . It is to be noted for both that the persons of type F are predominantly of large-city origin. In literature and journalism, types F and P are also decidedly of urban origin. Musicians of all types find their homes in the large city. Undoubtedly that which we call mental life, stimulation, and society has some effect. The numerous opportunities for training and the varied publics to which one can appeal are also factors in turning the younger generation of the city into these fields. And the factor of parents migrating to the city must be added to these other explanations. Nevertheless, Berlin, for example, did not yield the largest contribution in all Germany. The large city also attracts other elements that naturally are not accounted for in these figures of noted men. The only other field to which the large city made any significant contributions was that of mixed activity; it furnished 21 per cent of these persons,

the small city 37 per cent, and the country 42.1 per cent. In the stratification of the city this field of mixed activity is a characteristic functional type, the "Jack of all trades," alive to varied stimuli and revealing development in widely different lines. But the negative aspects of the large city are also of importance. For reasons given, the large city does not furnish pedagogues of type F. Few administrators come from the large city and none of those that do are of type F. It is significant that the large city furnishes only type F agriculturists. Theology hardly comes into consideration, and law, which is only slightly represented, more frequently recruited its type F persons from the small city. The large city made no great contributions to commerce and industry, although, with slight exceptions in industry, types F and P are decidedly of urban origin. It may be mentioned that type F zoologists are strictly of urban origin, but that those of types P and B_t are more likely to come from the small city.

We may discuss briefly the horizontal comparison of the 33 fields of activity, and add a word concerning the distribution of the population.

We find equal and unequal distributions of these various fields of activity among large city, small city, and country. Among the arts, architecture is influenced most by the small city, whereas the large city exercises a greater influence, relatively, in sculpture. Both author and publisher are more likely to have been born in the small city, although the contributions of the large city to these fields are large in comparison with its contributions in other fields. Theologians come from a uniform type of environment, lawyers from various types. There are clear differences in philosophy and pedagogy as to origin in the small city or the country, but these differences are less marked in philology, political economy, and history. Of the natural sciences, chemistry, physics, mineralogy, and zoology are dominated by persons from the small cities. In the other natural sciences the country leads to some extent at least. The normal gradations between different environments are indicated, for, obviously, the difference between country and large city is more clear-cut than that between small city and country. In the fields in which the large city does not make noticeable contributions, the relationships between the small cities and the real villages are important. In technology we also find the small city and the country approaching each other; only when employment in the place of birth is decisive does the small city lead. An approach to equality of origin is also found in administration, military affairs, and organization; in these fields in which there are small figures for the large city the origin may seem somewhat heterogeneous, but is by no means conditioned by the large city. It is of importance that commerce

and the crafts, on the other hand, reveal a decided tendency to attract men from the small city and the country.

We may call attention to the relationships revealed by the German occupational census of 1907, because these are of importance for our purposes. According to this census the distribution of persons engaged in the occupations listed was as follows:

PLACE OF RESIDENCE PER 100 MEMBERS OF EACH OCCUPATIONAL GROUP *

OCCUPATIONAL GROUP	OPEN COUNTRY	SMALL CITY	LARGE CITY
Agriculture and forestry	85.3	13.9	0.8
Industry and mining	26.4	50.5	23.1
Commerce and transportation	17.7	45.3	37.0
Personal service	16.0	41.5	42.5
Varied wage work	11.3	47.0	41.7
Army and navy	4.4	67.8	27.8
Professions and public service	22.2	47.2	30.6
Without occupation	31.6	46.3	22.1

* EDITORS' NOTE.—The reader is advised to compare this table with the first one in this reading.

It is significant to note that, while the data as to place of origin show that representatives of the military group came from the small city and country in about equal proportions, the occupational census naturally assigns the largest share to the garrison cities. Thus the recruits for this occupation do not come entirely from parents already engaged in it. Our figures for industry, including smelting, are also much more differentiated, whereas the census figures divide them almost equally among large city, small city, and country. For commerce the relative figures are reversed. In our figures the large city furnishes the smallest proportion; in the occupational statistics, it stands in the second place. Our figures also show that the noted persons come from other districts; that is, they are migrants. In the occupational census, the city is naturally well represented, proportionally, among the professions and in public service (teachers and officials of all kinds); in our figures, the large city has a less important rôle, leading clearly only in the field of art. Nowhere, however, do we obtain a mean percentage contribution of 22 per cent for the large city, such as is found in the occupational census. These examples of the many relationships that might be pointed out should suffice to indicate that the geographical origins of these notables are not wholly explained by the influence of familiarity with given occupations, or by local examples. We find no agreement

between the percentage distribution of noted persons according to geographical origin and the distribution of all members of the same occupational groups.

The social status of the parents of noted men.—A classification of the social status of the parents of these noted men reveals that 7.2 per cent come from the lower class, 49.3 per cent from the middle class, and 43.5 per cent from the upper class. Thus the middle class furnishes the largest share.

Little need be said concerning the fact that in pedagogy the members are recruited from the middle and lower classes. It has always been a favored means of climbing the social ladder. We call attention again to the large contributions of agriculture to this field. At the same time we notice that the large contributions of the country to theology come from the upper classes there, the ministers, doctors, and so on. Philosophers born in the open country generally come from the middle class. We see again that the rural origin of philosophers is probably to be attributed, to some extent, to the fact that agriculture fosters meditation. The small contribution of the lower class to agriculture is striking. The leading farmer of today does not come from the lower classes, nor does he come from the feudal upper class. More often he comes from the circle of agricultural laborers or from entirely different middle-class occupations.

The middle class makes its largest contributions to agriculture, military affairs, political economy, industry, commerce, literature, and journalism. It also furnishes more than 50 per cent of the noted men engaged in administration, construction, cosmology, pedagogy, philosophy, music, and sculpture.

The percentage contributions of lower, middle, and upper class, respectively, are: type B_t, 8.1, 50.6, and 41.3; type P, 5.35, 49.25, and 45.4; type F, 5.35, 49.9, and 44.75. Thus we see that the most productive minds come from the middle class. It is especially interesting to note that every type F farmer comes from the middle class.

In general, one gains the impression that [study of] the three classes of fathers reveals definite tendencies towards specific activities on the part of their successful sons. We may summarize these tendencies by pointing out the relatively slight contributions of the lower class, specific selection for certain fields in the upper classes, and a diffusion of the middle class into nearly all fields.*

* EDITORS' NOTE.—See a series of important data concerning the classes from which the farming and other groups in Germany are recruited, the contributions of these groups to the ranks of prominent men, and the success of their social climbing in J. Nothaas' "Sozialer Auf- und Abstieg im deutschen Volke," *Kölner Vierteljahrshefte für Sociologie*, IX, 61–81, 1931; and *Beiträge zur Statistik Bayerns*, Heft 117, 1930. These studies appeared too late to permit the inclusion of selections from them in the present work.

183. Fritz Maas: Concerning the Conditions of Descent of Intellectual Leaders *

The material for my research has been taken from the most reliable collections of biographies known to me, the "Allgemeine Deutsche Biographie" (published by Liliencron) and, in addition, the "Biographische Jahrbuch" (published by Bettelheim). From these works, containing more than 30,000 biographies, I have selected men born after 1700 to whom more than two pages of text are devoted, thus obtaining 4,421 famous persons, and these I have divided into 17 different professional groups. The degree of importance that was necessary for acceptance in my list is, as I have convinced myself through several varied tests, decidedly higher than that demanded by Odin; and it corresponds, approximately, to that of his *gens de lettres de talent.* As the earliest date limit I have chosen the year 1700, because the biographical reports previous to that year leave much to be desired. Even for the period of time covered by my research 14.4 per cent of the biographies are incomplete. Naturally, the latest date to use is the year 1910, with which the last volume of the "Biographische Jahrbuch" closes. In my research, therefore, are included all famous men (and women, whose number, however, is exceedingly small) who were born after 1700 and died before 1910. Since many of those born after 1840 are still living, the number from that time on decreases rapidly and ends, if I do not consider some born later, with those born before 1860. . . .

The table . . . gives a picture of the sample studied.

Eminent Men Classified According to Professional Groups

Professional Grouping	Number	Percentage
1. Poets (lyricists, dramatists, and novelists)	290	6.56
2. Writers (journalists, publicists, and essayists)	202	4.57
3. Musicians (practicing musicians, singers, virtuosos, directors, and composers)	193	4.36
4. Creative artists (painters, sculptors, architects, and master builders)	338	7.64
5. Stage artists (actors, directors, and producers)	90	2.04
Artistic sphere, total	1,113	25.17

* From Fritz Maas, "Ueber die Herkunftsbedingungen der geistigen Führer," *Archiv für Sozialwissenschaft und Sozialpolitik,* XLI, 154–177 (September, 1915).

EMINENT MEN CLASSIFIED ACCORDING TO PROFESSIONAL GROUPS—*Continued*

PROFESSIONAL GROUPING	NUMBER	PERCENTAGE
6. Theologians (pastors, abbots, deacons, bishops, and university professors)	504	11.40
7. Philologists (philologists, philosophers, and economists)	507	11.47
8. Historians (research historians, archeologists, and historians of arts and literature)	301	6.81
9. Pedagogues (preparatory school professors, principals, and educators)	118	2.67
10. Legal profession (lawyers, university professors, and civic and government officials)	323	7.31
11. Medical men (doctors, university professors, and apothecaries)	198	4.48
12. Exact scientists (astronomers, mathematicians, chemists, physicists, technicians, and engineers)	179	4.05
13. Natural scientists (zoologists, botanists, geologists, geographers, and explorers)	229	5.18
Intellectual sphere, total	2,359	53.37
14. Statesmen (directing state officials, diplomats, and politicians)	498	11.26
15. Agriculturists (farmers, foresters, and teachers in agricultural schools)	69	1.56
16. Military men	295	6.67
17. Merchants (tradesmen and manufacturers)	87	1.97
Practical sphere, total	949	21.46
Total	4,421	100.00

TABLE V

PROMINENT MEN CLASSIFIED ACCORDING TO DESCENT FROM FATHERS IN SPECIFIED PROFESSIONAL GROUPS

PROFESSIONAL GROUPING	NUMBER	PERCENTAGE
Artists	274	7.2
Academicians	181	4.8
Pastors	491	13.9
Officials	641	16.9

TABLE V—*Continued*

Professional Grouping	Number	Per-centage
Teachers	195	5.2
Physicians	215	5.7
Barristers	137	3.6
Landowners	289	7.6
Officers (military)	254	6.7
Merchants	415	11.0
Manufacturers	58	1.5
Higher classes, total	3,150	83.2
Subaltern officials	66	1.7
Tradesmen	41	1.1
Clerks	36	1.0
Artisans	338	8.9
Peasants	142	3.8
Proletariat	12	0.3
Lower classes, total	635	16.8
Totals	3,785	100.00
Unknown, orphans	636	
Total	4,421	

Of the 4,421 persons examined only 635, or about one-sixth, were descended from the lower classes (3,150 were from the higher classes, and the descent of 636 is unknown). (See Table V.) The predominance of the higher classes is strengthened by the fact that this class in itself is only a small portion of the entire population, about 80 per cent of which consists of members of the lower classes of society. (Odin's results for France are very similar.) Even if a preponderance of the higher classes was to be expected, this overwhelming majority shows, nevertheless, that the advantages of a secure position socially and economically are almost an essential element for fame.*

Men of the lower classes who have become famous will receive, as stated previously, our particular attention. But even here we find no convincing fact that would speak for the particular effect of talent, nothing that could not be explained from the viewpoint of environ-

* Editors' Note.—These "environmentalist" statements of the author are rather dogmatic, as are his subsequent interpretations of his own data from the environmental standpoint.

TABLE VI

PERCENTAGE OF FAMOUS MEN OF LOW BIRTH AS COMPARED TO THE TOTAL NUMBER OF FAMOUS MEN

PROFESSIONAL GROUPING	LOWER MIDDLE CLASS	ARTISANS	PEASANTS	PROLE-TARIAT	TOTALS
Poets	6.2	7.9	4.1	0.3	18.5
Writers	5.4	3.5	3.5	0.5	12.9
Musicians	3.6	11.9	3.1	0	18.6
Painters	3.0	18.0	2.2	0.3	23.5
Stage artists	5.6	7.8	1.1	0	14.5
Theologians	3.4	8.5	5.7	0.8	18.4
Philologists	3.0	8.4	2.8	0.4	14.6
Historians	3.9	8.2	3.2	0	15.3
Pedagogues	4.2	14.4	7.6	0.8	27.0
Legal profession	2.2	4.3	2.2	0.3	9.0
Medical profession	3.5	5.6	4.6	0	13.7
Exact scientists	2.8	14.9	5.5	0.6	23.8
Natural scientists	2.6	3.9	1.3	0	7.8
Statesmen	1.4	2.2	2.2	0	5.8
Agriculturists	10.2	4.4	4.4	0	19.0
Military men	0.7	2.0	1.4	0	4.1
Merchants	3.6	12.6	1.2	0	17.4
Average	3.8	8.7	3.8	0.3	16.6

ment. It was to be expected that among the lower classes the artisans (see Tables VI and VII), who are intellectually most active and agile, would give the greatest number of famous men, more so than the stubborn, clumsy, and self-sufficient peasant class and the fettered, economically dependent middle class (subaltern officials, small tradesmen, and clerks) or the altogether negligible proletariat. Concerning the professional division I should like to distinguish the artistic professions from all the others, since they are not bound to any previous conditions of development and education, and their only goal is to prevail with their personal talents against the obstacles of their particular environment. Therefore we may expect to find a larger number of artists among the famous men of the lower classes than among the descendants of the higher classes, and this proves to be a fact (32.7 per cent against 23.0 per cent). If one holds talent primarily responsible for this, one sees clearly, by closer observation of the individual artistic activities, the influence of the surroundings. The profession of poet, technically

TABLE VIa

PERCENTAGE OF FAMOUS MEN PRODUCED BY THE LOWER CLASSES

PERIODS	ARTISTIC SPHERE	INTELLECTUAL SPHERE	PRACTICAL SPHERE
1700–1759	19.8	20.4	5.2
1760–1818	23.5	18.6	8.9
1818–1860	20.1	16.1	8.5
All periods	21.8	18.2	8.0

TABLE VII

PERCENTAGE DISTRIBUTION AMONG SEVERAL PROFESSIONS OF FAMOUS MEN FROM THE LOWER CLASSES

PROFESSIONAL GROUPING	LOWER MIDDLE CLASS	ARTISANS	PEASANTS	PROLE-TARIAT	AVERAGE
Poets	12.6	6.8	8.5	8.3	8.5
Writers	7.7	2.1	4.9	8.3	4.1
Musicians	4.9	6.8	4.2	0.0	5.7
Painters	7.0	18.0	4.9	8.3	12.4
Stage artists	3.5	2.1	0.7	0.0	2.0
Theologians	11.9	12.7	20.4	33.3	14.6
Philologists	10.5	12.4	9.9	16.7	11.5
Historians	7.7	7.1	6.3	0.0	6.9
Pedagogues	3.5	5.0	6.3	8.3	5.0
Legal profession	4.9	4.1	4.9	8.3	4.6
Medical profession	4.9	3.3	6.3	0.0	4.3
Exact scientists	3.5	7.7	7.0	8.3	6.6
Natural scientists	4.2	2.7	2.1	0.0	2.0
Statesmen	4.9	3.3	7.8	0.0	4.6
Agriculturists	4.9	0.9	2.1	0.0	2.0
Military men	1.4	1.8	2.8	0.0	1.9
Merchants	2.1	3.3	0.7	0.0	2.4

least dependent upon fixed previous conditions, is found about equally in all classes. It is the only artistic profession that has its origin in any considerable degree in the peasant class and the dependent middle class. The peasant class, furthermore, almost completely lacks individuals with histrionic talent. The artisans have a great majority in the professions of painters and musicians. This is a well-known fact and is due to their close relationship with most of the artisan's activities.

Also in the intellectual sphere the participation of the lower classes is largest where it is stimulated by purely external influences, as is the case in the theological professions. The influence of the clergy, especially the Catholic, and the views of the parents are the main reasons why the sons of peasants who wish to choose an academic profession so often become pastors. Among the clergy are to be found one-fifth of all peasants' sons grown famous, as well as fairly high percentages of famous persons of artisan and middle-class origin (12.7 and 11.9), and even of the proletariat, which shows little, otherwise.

The second most popular profession among the descendants of the lower classes is that of philologist; and this probably, for the greatest part, is due to external reasons. Talent seems to play a larger part when a considerable number of artisan and peasant sons turn to the study of natural science; even though the interest in the problems of natural science may have been stimulated by environment. How important the obstacles of environment are can be shown clearly in the slight participation of the lower classes in practical professions. The difficulties of education and of a strange environment have decreased the participation of the lower classes. The uniformly slight productivity of the proletariat sinks to zero, and that of the other classes is not far behind. Two particularly remarkable circumstances are found among the peasants. The first, the exceedingly low participation in the professions of agriculturist and forester, is easily explained. The famous foresters and agriculturists have gained merit through the invention of a new and rational method of husbandry, accomplishments foreign to the conservative, intractable, and stubborn peasant. Still more remarkable is the fact that there are a great number of peasant sons among the famous statesmen. This can only be explained through the influence of natural endowment, especially the famed slyness and craftiness of the peasant, which is a characteristic very advantageous for diplomats. (An analogy is the fact that the sons of horse dealers grown rich become the most successful, or should I say crafty, solicitors.)

The situation is still clearer when one gathers individual professions into homogeneous groups, the artistic, the purely intellectual (philologists, historians, natural scientists, and research men) and the other more or less practical or technical professions. It is shown that (with the exception of pastors, where, as has been said, strong external influences are at play) there is a considerable difference in the division of professions, a division into three groups: a strongly frequented group (artists, pure academicians, and pastors), a medium group (the other intellectual professions, which already show practical tendencies, officials, doctors, barristers, and teachers), and a little frequented group

(the exclusively practical professions—officers, agriculturists, and merchants). (See Table VIa.)

Therefore, in the professions where talent is mainly sufficient (the artistic and purely scientific professions) the participation of the lower classes is largest. Where, however, besides a corresponding talent, a certain purely external environmental influence is necessary, their participation is very small.

The period under consideration is marked off by two decisive historical events, the French Revolution and that of 1848, into two equal sections of 59 years each: 1730–1789 and 1789–1848. For the average year in life at which begin the deeds and works upon which fame is based I have taken the thirtieth year. Therefore, all important men born between 1700 and 1759 belong to the first period, and all those born between 1759 and 1818 belong to the second. The third period, which includes all those born after 1818, is, as stated, incomplete. The results from the latter are chiefly valuable for the time before 1860.

Taking these three periods we will examine the changes in the groupings of descent of famous men and first, in particular, the shifting in the productivity [of famous progeny] and in choice of profession among the lower and upper classes.

The productivity or the lack of productivity of the lower classes in comparison to the upper in regard to famous progeny—in other words, the social seclusion and exclusiveness of the famous—has not been especially studied, as yet. It has already been stated that a great part of the descendants of the lower classes go into artistic and intellectual professions and the reason for this has been given. The result is that the artistic and intellectual spheres show a somewhat smaller social seclusion than the practical sphere, 21.8 per cent and 18.2 per cent, respectively, as against 8.0 per cent invaders. The contrast, however, seems to diminish in the course of the examined time; the invasion into intellectual professions decreases, while that into the practical professions increases. (See Table VIa.)

The individual professions show an interesting distinction in accessibility. The profession of a poet is more accessible than that of a writer (the invaders constituted 18.5 and 12.9 per cent, respectively) [see Tables VI and XIII] since the latter is less direct and emotional and asks for more positive and technical knowledge. The greatest participation of the lower classes is found in the professions of teachers and pedagogues (27.0 per cent). For these also fixed previous conditions are not very necessary and in the lower classes the profession of teacher next to that of pastor is the most usual goal. The very decided inclination towards the study of exact sciences can be explained from the

TABLE XIII

Historical Shiftings in the Preferment of Particular Professions by the Lower Classes

Professional Grouping	Lower Middle Class			Artisans			Peasants			Proletariat			Average		
	1700–1759	1759–1818	1818–1860	1700–1759	1759–1818	1818–1860	1700–1759	1759–1818	1818–1860	1700–1759	1759–1818	1818–1860	1700–1759	1759–1818	1818–1860
Poets	12.5	6.5	26.5	8.1	4.5	12.0	13.6	8.2	6.4	0.0	14.3	0.0	10.1	5.9	13.3
Writers	9.4	7.8	5.9	0.0	2.0	4.0	0.0	6.9	4.3	0.0	14.3	0.0	2.5	4.5	4.4
Musicians	6.2	3.9	5.9	12.9	7.0	1.3	9.1	4.1	2.1	0.0	0.0	0.0	10.1	5.6	2.5
Painters	6.2	9.1	2.9	8.1	21.8	16.0	4.5	4.1	6.4	0.0	0.0	50.0	6.7	15.1	10.8
Stage artists	6.2	1.3	5.9	3.2	1.5	2.7	0.0	1.4	0.0	0.0	0.0	0.0	3.4	1.4	2.5
Theologians	18.7	11.7	5.9	17.7	11.9	10.7	27.3	19.2	19.2	33.3	28.5	50.0	20.2	13.7	12.9
Philologists	3.1	14.2	8.8	14.5	11.4	13.3	4.5	9.6	12.8	33.3	14.3	0.0	10.1	11.8	12.1
Historians	15.6	6.5	2.9	1.6	8.5	8.0	4.5	5.5	8.5	0.0	0.0	0.0	5.9	7.3	7.0
Pedagogues	0.0	3.9	5.7	1.6	5.5	6.7	9.1	2.7	10.6	33.3	0.0	0.0	3.4	4.5	7.6
Legal profession	0.0	6.5	5.9	4.8	4.0	4.0	4.5	5.5	4.3	0.0	14.3	0.0	3.4	5.0	4.4
Medical profession	6.2	5.2	2.9	4.8	2.5	4.0	4.5	6.9	6.4	0.0	0.0	0.0	5.0	3.9	4.4
Exact scientists	3.1	3.9	2.9	14.5	6.0	6.7	9.1	6.9	6.4	0.0	14.3	0.0	10.1	5.9	5.7
Natural scientists	0.0	5.2	5.9	0.0	2.5	5.3	0.0	2.7	2.1	0.0	0.0	0.0	0.0	3.1	4.4
Statesmen	3.1	6.5	2.9	0.0	4.0	4.0	0.0	9.6	8.5	0.0	0.0	0.0	0.8	5.6	5.1
Agriculturists	6.2	3.9	5.9	1.6	1.0	0.0	0.0	2.7	2.1	0.0	0.0	0.0	2.5	2.0	1.9
Military men	0.0	2.6	0.0	1.6	2.0	1.3	4.5	4.1	0.0	0.0	0.0	0.0	1.7	2.5	0.6
Merchants	3.1	1.3	2.9	4.8	4.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.2	2.5	0.6
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

viewpoint of these researches only through the particular presence of talent. The great number of painters of low birth is to be ascribed exclusively to the talented artisan class.

The intellectual profession remarkable for its exclusiveness is the legal profession, while the exclusive practical professions are those of the statesmen and the military men. These are the professions that make greater demands on account of scientific and practical prerequisites. In the last two, descent from a socially high and long respected family is indirectly required. More than one-fourth of the statesmen (26.8 per cent) come from the old aristocracy, as well as two-thirds (69.6 per cent) of the officers, while four-fifths of the latter are altogether of the nobility.

In regard to historical changes of these conditions one may say that the number of poets, writers, pedagogues, natural scientists, and statesmen produced by the lower classes becomes greater, while the number of the musicians, philologists, historians, medical men, exact scientists, and merchants decreases. The recruiting of the other professions from the lower classes remains fairly static. The first movement is to be

PERCENTAGE OF PROMINENT MEN IN PARTICULAR FIELDS PRODUCED BY THE LOWER CLASSES IN GIVEN PERIODS

CLASSES OF PROMINENT MEN	ALL LOWER CLASSES		
	1700–1759	–1818	–1860
Poets	19.4	18.4	25.9
Writers	7.3	18.3	17.1
Musicians	32.4	22.5	9.8
Painters	21.7	31.0	22.7
Stage artists	20.0	17.2	15.4
Theologians	26.3	20.6	22.2
Philologists	21.0	18.1	14.6
Historians	21.2	20.8	12.0
Pedagogues	22.2	29.1	41.4
Legal professions	7.4	11.4	9.9
Medical professions	21.4	15.9	13.7
Exact scientists	54.5	24.4	21.4
Natural scientists	0.0	12.6	10.6
Statesmen	1.0	7.5	8.7
Agriculturists	21.5	19.4	23.1
Military men	2.5	5.8	2.9
Merchants	27.7	22.5	7.1
Average	16.3	17.3	16.0

ascribed to the widening range of interest, viewpoint, and education of the lower classes, and with the statesmen to a decreasing social and caste-like exclusiveness also. The second movement is caused by the constantly growing scientific, practical, and economic requirements (the last in the case of merchants especially).

The productivity and preferences of the lower classes within themselves have already been analyzed. There is not much to be added in regard to their historical changes.

The most productive class, the artisans, remains stable; the productivity of the middle class and the proletariat decreases; that of the peasant class, whose rural seclusion and stubbornness disappears, slowly increases.

184. Rural and Urban Mental Deficiency in England and Wales *

INTRODUCTION

. . . We arranged for him [Dr. O. E. Lewis] to hold investigations in six areas each containing a population of approximately 100,000 persons. The areas we selected were an extrametropolitan urban area, a north country cotton town, a coal-mining district in the Midlands, an agricultural district in the eastern counties, a rural area in the southwest containing a large town, and a thinly populated rural area comprising two counties in Wales. These areas were chosen because of their geographical position and general industrial features and may be regarded as fairly typical of England and Wales as a whole except in regard to the relative populations of urban and rural areas. The selected areas contain approximately equal urban and rural populations, some 300,000 of each, whereas in England and Wales as a whole the urban population is about four times as large as the rural. In discussing the findings of the investigation, therefore, it is necessary to distinguish between the numbers in urban and rural areas, and no general deduction can be made from any figure which merely gives the total incidence of mental defect in all the six areas combined. . . .

Broadly speaking, the program postulated the cooperation of the local education and mental deficiency authorities, board of guardians, prison authorities, and other public bodies in each area in supplying all the possible information at their disposal as to all mental defectives known to them; the enlistment of the help of all local mental welfare associations and of any other voluntary bodies and persons interested

* Taken from the Report of the Mental Deficiency Committee, 1925–1927, a joint committee of the Board of Education and Board of Control, London, 1929, Part I, pp. 71–73; Part II, pp. 3–175.

in social work; the visiting of all public elementary and special schools, and, so far as practicable, all private and preparatory schools in the area and also of any residential schools and institutions outside the area at which there were known to be children or adults whose homes were within any of the investigated areas; and lastly, the visiting of the homes of all defectives reported or discovered during the investigation.

. . . The carefulness and thoroughness of the investigation in respect of children may be gauged from the fact that no child was entered on the returns as mentally defective until he had passed through three processes—selection by the head teacher, examination by group tests, and individual examination by the medical investigator. This triple process was calculated, on the one hand, to ensure that all possible defective children came to the investigator's notice and, on the other hand, to be effective in eliminating doubtful cases. While therefore the ascertainment was necessarily incomplete, as we shall show below, in respect of certain sections of the population, it may fairly be claimed that in respect of children between the ages of 7 and 14 it was almost certainly as complete, accurate, and thorough an ascertainment as could be secured by any investigation of this nature.

THE AREAS STUDIED

. . . A few preliminary notes on the social and industrial features of each district may be helpful in the interpretation of our statistical data.

(a) *An extrametropolitan urban area (urban area A).*—As in most extrametropolitan districts, the population of this investigated area had grown rapidly. Sixty years ago it was little more than a village on the outskirts of London, whereas now it is densely inhabited by a population of about 150,000. Few of the families have been in this area for more than a generation or two, and therefore it lacks the local traditions that seem necessary to secure the condition of social stability found in the older provincial towns. In most extrametropolitan districts there is a lack of what may be called "social cohesiveness"; and the investigated area is fairly typical in this respect. . . .

(b) *A cotton town in the north (urban area B).*—Urban area B, one of the chief centers of the weaving industry in the north of England, was chosen because it is typical of towns where textile industries predominate. The population increased steadily throughout the last century until at present it is about 126,000. The gradual growth of the town has been conducive to a relatively high degree of civic stability. Its public departments have been established for several generations and all the essential social services have consequently been thoroughly

organized, this proving a valuable initial asset in our investigation. A stranger cannot be long in this town without realizing the pronounced civic spirit of the people. . . .

(c) *A mining area in the Midlands (urban area C.)*—The committee desired to make one investigation in a typical mining area, and since it was not thought practicable on account of the industrial conditions prevailing at the time to visit either the north country or the South Wales coal fields for this purpose, they decided that the investigation should be held in a Midland district in which the predominant industry was coal mining and the main subsidiary industries those of steel and engineering, which are closely associated with and naturally dependent upon coal mining. The actual area selected consisted of the greater part of a large town, an outlying urban district, and a so-called rural district, which contained a number of small mining towns.

The figures of the successive census returns for the large town in this area are no guide to the rate of increase of population because the boundaries of the borough have been extended on more than one occasion during the last fifty years. Its population has, however, increased gradually during the last century, and it has many of the features of an old established town.

(d) *An agricultural area in the eastern counties (rural area D).*—The next district to be chosen was a typically rural district in one of the eastern counties. In the area selected for investigation there are only about half a dozen towns with a population of more than two thousand, and the largest of these contains less than six thousand inhabitants. It is almost exclusively an agricultural area with large farms which give employment to most of the men, though in a few districts there are a number of smaller farms and small holdings. The area is regarded as one of the most prosperous agricultural districts of the whole country. The railway facilities, however, are not good, and as yet the motor services are not frequent, with the result that even today many of the villages are somewhat isolated. . . .

The housing and general social conditions of even the poor people in this area are distinctly good. Most of the men are employed by farmers owning or renting large farms, and many of them and their families occupy cottages on the farms. Generally, the cottages are in good condition, and the standard of comfort is higher in this than in many rural areas. As the farms are for the most part large and consist in the main of well-cultivated arable land, the number of agricultural laborers employed on them is correspondingly great, the proportion of laborers to farmers being as high as 339 to 100; and in addition many women are employed on the land. . . .

(e) *A rural area in the southwest (rural area E).*—This must be regarded as a hybrid rural and urban area. The hundred thousand population was made up of about sixty thousand in the definitely rural districts and of about forty thousand in a large central town. This town contains no large factories or workshops, and is predominantly an agricultural center; its prosperity depends upon the rural community that surrounds it, and the chief interests of the inhabitants are agricultural. Our data for the rural districts and for the large town were prepared separately. The data for the town corresponded much more closely in their general features to those for rural than to those for urban areas; and we therefore decided for the purpose of our report to include this town among the rural areas.

The rural area investigated in the southwest consisted of four rural districts, one small municipal borough and one small urban district. A large portion of this district lies between two expanses of moorland. The hilly character of the country adds to the difficulty of communication between the villages which are situated in the various valleys. The inhabitants of a valley may be said to form a social unit of custom and tradition, and each valley seems to have its special characteristics. Some of these villages are very inaccessible, especially those at the upper end of the valleys. The district as a whole is sparsely populated, having scarcely 0.1 inhabitant to the acre, whereas in rural area D the corresponding figure is 0.2. The proportion of cultivated arable land is small, the land being chiefly used for grazing purposes. It follows that the number of farm laborers employed is comparatively low, the proportion of laborers per 100 farmers being only 148 in the rural districts of this area as compared with 339 in rural area D; and this probably is the best criterion of the agricultural conditions in these two counties.

(f) *A Welsh rural area (rural area F).*—The Welsh area consisted of two counties, and probably no better choice of a typically rural bilingual district in Wales could have been made. Except in one or two of the coast towns, the children speak Welsh in their homes, and Welsh is the normal language of instruction in all the infant school departments. Investigations made in recent years in the schools of this rural area seem to show that the monoglot children on an average made better scores than the bilingual children when tested by the Binet Scale of Intelligence. With a view to reducing to a minimum the linguistic difficulties of the children the tests in the present investigation were conducted almost entirely in the Welsh language.

One of these counties is very mountainous; the other also is mountainous in parts, although on the whole it is best described as hilly

with large tracts of low-lying marshland. The soil in both counties is poor and unproductive: the farms are small and consist almost completely of grazing land. This results in the proportion of farm laborers to farmers being low; in these two counties, for every 100 farmers there are only 56 farm laborers, as compared with 148 in rural area E and 339 in rural area D. In two districts of this area there are large slate quarries, and these districts are so densely populated that they are really urban in character. About the middle of the last century there were lead mines in one part of the area, which gave employment to large numbers, but all these mines have now been abandoned, and the lead-mining districts present a somewhat neglected and decadent appearance.

SAMPLING

Any generalization from our data raises the question of the degree to which the six investigated areas are representatives of England and Wales as a whole; and it is necessary to discuss this before proceeding to give any estimates based upon our figures.

In the first place, the chosen areas are well distributed geographically, the north, south, east, west, Midland, and extrametropolitan districts being represented. In the second place, the social conditions of the inhabitants of these areas are fairly typical of those of the whole country as judged by the statistical data relating to housing conditions in the 1921 census. In the third place, the occupational conditions, whether commercial, industrial, or agricultural, are certainly typical of those found in the urban and rural districts of England and Wales generally. . . .

One criterion of the representative character of the six areas is the ascertainment of mental defectives by the local M. D. and education authorities.

TABLE E

ASCERTAINMENT PER THOUSAND TOTAL POPULATION

AREA	MEAN
Urban area A	1.37
Urban area B	1.36
Urban area C	2.25
Rural area D	0.97
Rural area E	3.26
Rural area F	2.05
Mean incidence for the above areas	1.88
Mean incidence for England and Wales	1.59

The incidence of ascertainment in 1927 by local M. D. authorities in each of the areas concerned, together with the mean incidence for those areas and for England and Wales as a whole, is shown in the [preceding] table.

These figures show that the mean incidence of ascertainment made by the local M. D. authorities in the investigated areas is 1.88 per 1,000 as compared with 1.59 for the whole of England and Wales. The higher incidence in the investigated areas is, however, chiefly due to the exceptionally high ascertainment in one area; and if this were excluded the mean ascertainment for the remaining areas would be practically the same as that for the whole country, namely, 1.60.

TABLE F

INCIDENCE OF MENTALLY DEFECTIVE CHILDREN (ALL GRADES) PER THOUSAND CHILDREN ON THE REGISTERS OF PUBLIC ELEMENTARY SCHOOLS

AREA	MEAN
Urban area A	5.79
Urban area B	4.21
Urban area C	8.60
Rural area D	5.62
Rural area E	7.61
Rural area F	3.87
Mean for the above areas	6.03
Mean for England and Wales	6.38

The ascertainment made by the local education authorities of mentally defective children affords another criterion of the extent to which the investigated areas are typical of the whole country, although, again, it should be recognized that the ascertainment of many of the local education authorities in the country is far from complete. Table F gives the figures for 1926 for each of the local education authorities represented in the investigated areas, and those for the whole country.

The mean incidence of ascertainment by the local education authorities in the investigated areas is 6.03 per 1,000 school children, which approximates fairly closely to the figure of 6.38 for the whole country. . . .

Still another criterion is the incidence of insanity. Mental deficiency and insanity are so closely related that it is now recognized that a general correlation exists between the incidence of these two abnormal conditions. Therefore the numbers of insane patients in the investigated areas may be regarded as some indication of the prevalence of

mental deficiency in these areas. The figures given in Table G show the incidence per thousand population of (1) all rate-aided insane persons and (2) the rate-aided insane in mental hospitals. Although these figures do not include the whole number of insane persons in these areas, they relate to so large a proportion that they can be taken as a reliable basis for our present purpose, especially when it is remembered that large numbers of those certified as insane are congenital mental defectives.

TABLE G

INCIDENCE PER THOUSAND POPULATION OF RATE-AIDED INSANE

AREA	ALL RATE-AIDED INSANE *	RATE-AIDED INSANE IN COUNTY AND BOROUGH MENTAL HOSPITALS
Urban area A	2.41	2.32
Urban area B	2.94	2.39
Urban area C	1.77	1.31
Rural area D	3.22	2.82
Rural area E	3.33	2.82
Rural area F	2.91	1.89
Mean for the above areas	2.76	2.26
Mean for England and Wales	3.18	2.67

* This total comprises rate-aided insane persons in county or borough mental hospitals, in poor law institutions, and those residing with relatives or others.

. . . It will be seen that the mean incidences of the total rate-aided insane and also of the rate-aided insane in mental hospitals are somewhat lower in the investigated areas than in the whole of England and Wales. This difference between the mean incidence of insanity in the investigated areas and in the whole country is, however, not so large as to invalidate our contention that the chosen areas are fairly representative. But so far as these figures indicate (and we think they are a better criterion than any of the other data we quote) it seems that if we generalize from our data for these six areas we are likely to underestimate rather than to overestimate the number of mentally defective persons in the whole country.

There is still another criterion which can be applied to show whether the chosen areas are representative, namely, the statistical data of the poor-law authorities relating to the number of persons suffering from mental infirmity who are either patients or inmates of institutions, or in receipt of domiciliary relief. . . . The numbers and incidences are given in Table H.

TABLE H

INCIDENCE PER THOUSAND POPULATION OF MENTALLY INFIRM PERSONS IN RECEIPT OF POOR-LAW RELIEF

POOR-LAW UNIONS	INCIDENCE
Urban area A	3.54
Urban area B	3.17
Urban area C	1.93
Rural area D	4.24
Rural area E	4.10
Rural area F	3.56
Mean incidence for the above areas	3.26
Mean incidence for England and Wales	3.41

The mean incidence for the six investigated areas and for England and Wales again approximate closely. The slightly lower incidence for the investigated areas tends to confirm the conclusion indicated by the figures relating to rate-aided insane patients, namely, that the areas chosen for investigation have a somewhat lower proportion of mentally abnormal persons than would be found in the country generally. The figures in Table H again show that the incidence is higher in the rural than in the urban areas. The incidence in urban area C is again low, and this is explained partly by the relatively small number of older persons in this new industrial area; but probably some other extraneous factors also would account for this low figure.

General method of procedure.—We were compelled to limit our period of investigation to about twelve weeks in each urban and fourteen weeks in each rural area, the latter naturally requiring a week or two longer to investigate. Our investigation in each area included both children and adults; and to ensure that no one group or district should monopolize an undue share of our time, we prepared at the outset of our inquiry in each area a rota of visits to the schools, villages, and institutions. We cannot and do not claim that our ascertainment of mental defectives in any area was complete. A complete ascertainment is possible only by some permanent organization in each district which would have an active group of workers who would know personally all the families in the district. Great care was taken so to divide the time as to ensure that the more important aspects of our inquiry received most attention. Our chief concern was ascertainment, and all other aspects of the work were regarded as secondary.

. . . In most areas almost all children between the ages of five and fourteen attend public elementary schools. If these children are investi-

gated with equal thoroughness in each area we may assume with a fair degree of confidence that the ascertainments of children in the various areas are really comparable. Therefore, while not allowing this part of our work to encroach unduly upon the investigation of the adult population, we decided to make our ascertainment of the school children as careful and as complete as we could in the time at our disposal.

It is obvious, however, that as our chief purpose was to ascertain the mentally defective children, much time and energy would be wasted if all this group of retarded children were examined individually. Therefore, it was decided to examine this retarded group with group tests, and the children who secured the lowest number of marks were examined individually by the medical investigator. . . . The group tests formed a standard so objective in character that the influence of the personal factor was reduced to a minimum, while the personal factor inevitably associated with the individual examination by the medical investigator was the same for all areas. . . .

The completeness with which we were able to ascertain the adult mental defectives living in the general community depended largely upon the degree to which the various social services had been organized; this was especially true in the urban areas.

. . . A number of the adult mental defectives were found because they were related to mentally defective children seen at school. In rural areas, especially, the teachers gave most valuable information concerning the family histories of mentally defective pupils, and this frequently led to the ascertainment of adult relatives who were also defective. In urban districts the teachers were not able to give us so much assistance in this respect; but when we visited the homes of some of the mentally defective children who had been seen at the school other members of the family who were also defective were often discovered.

At the outset of our investigation in each area we were supplied with or given facilities to prepare a complete list of all the mentally defective adults who had been sent by the local M. D. authority to various institutions. If these institutions were in or near the area investigated, we were able to visit and examine the defectives; but we were unable to visit those who had been sent to institutions in distant parts of the country, and for these cases we had to rely upon the reports received from the medical officers of the institutions.

STANDARDS

. . . The value of any statistics relating to the incidence of mental deficiency depends upon a clear formulation of the standards adopted. Many of the estimates of the numbers of mentally defective persons

TABLE 3

Summary of Ascertainment

Area		Total Number of Defectives Ascertained	Ascertainment per 1,000 of Total Population
Urban area A	Children *	332	3.16
	Adults †	268	2.55
	Total	600	5.71
Urban area B	Children	326	3.15
	Adults	377	3.65
	Total	703	6.80
Urban area C	Children	457	4.19
	Adults	375	3.42
	Total	830	7.60
Rural area D	Children	498	5.02
	Adults	468	4.72
	Total	966	9.74
Rural area E	Children	500	4.82
	Adults	635	6.11
	Total	1,135	10.93
Rural area F	Children	491	4.81
	Adults	609	5.97
	Total	1,100	10.78
Six areas	Children	2,604	4.18 ‡
	Adults	2,730	4.38 ‡
	Total	5,334	8.57 ‡

* All persons who have not attained their sixteenth birthday.
† All persons over sixteen.
‡ These incidence rates are not applicable to the country as a whole.

given by various investigators cannot be compared or rightly evaluated because no definite conception of the criteria of mental deficiency applied has been given.

In considering the classification of mental defectives, it must be clearly borne in mind that the lines of demarcation are to a great extent arbitrary. The idiot merges into the imbecile, the imbecile into the feeble-minded, the feeble-minded into the dull and backward, and the dull and backward into the normal, by insensible gradations. Apart, perhaps, from cases of the lower grades and pathological cases generally, the variations in the distribution of intelligence appear to be continuous: there are no gulfs or gaps. The borderlines to be drawn are really a matter of convenience and convention.

Idiots [were defined as] persons so deeply defective in mind from birth or from an early age as to be unable to guard themselves against common physical dangers.

Imbeciles [were defined as] persons in whose case there exists from birth or from an early age mental defectiveness not amounting to idiocy, yet so pronounced that they are incapable of managing themselves or their affairs, or, in the case of children, of being taught to do so.

Feeble-minded [were defined as] persons in whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision, and control for their own protection, or for the protection of others, or, in the case of children, that they by reason of such defectiveness appear to be permanently incapable of receiving proper benefit from the instruction in ordinary schools.

GENERAL RESULTS

General ascertainment and incidence.—Table 3 gives a summary of the numbers of mentally defective children and adults who were ascertained in each area, and the incidence per 1,000 of the total population. The mean ascertainment for the six areas is 8.57 mentally defective persons per 1,000 population; that is, a representative sample of a thousand population in these areas would have 8.57 mentally defective persons; approximately one-half (4.18) of these would be children and the other half (4.38) adults.

There are two fundamental classifications of these data: (*a*) those for urban and rural areas; (*b*) those for children and adults. A comparison of the figures in Table 3 for the first three areas (urban areas A, B, and C) with those for the last three areas (rural areas D, E, and F) shows at once that there is a marked difference of incidence of men-

TABLE 7

MEAN INCIDENCE PER 1,000 TOTAL POPULATION IN THE INVESTIGATED URBAN AND RURAL AREAS

AREAS	AGES	FEEBLE-MINDED			IMBECILES			IDIOTS			ALL GRADES		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Urban Areas	Children 7—	0.22	0.11	0.33	0.07	0.07	0.14	0.02	0.01	0.03	0.31	0.18	0.49
	7+	1.29	1.13	2.42	0.29	0.20	0.48	0.07	0.04	0.11	1.64	1.38	3.02
	Total	1.51	1.24	2.75	0.36	0.26	0.62	0.09	0.05	0.14	1.95	1.56	3.51
	Adults	1.20	1.25	2.45	0.33	0.28	0.60	0.10	0.05	0.15	1.63	1.57	3.20
	Total of all ages	2.71	2.49	5.20	0.68	0.54	1.22	0.19	0.10	0.30	3.59	3.13	6.71
Rural Areas	Children 7—	0.21	0.18	0.40	0.07	0.06	0.13	0.01	0.01	0.02	0.30	0.25	0.55
	7+	1.91	1.68	3.59	0.34	0.26	0.60	0.08	0.07	0.14	2.32	2.01	4.33
	Total	2.12	1.87	3.99	0.41	0.32	0.73	0.09	0.08	0.16	2.62	2.26	4.88
	Adults	1.97	2.30	4.28	0.59	0.50	1.09	0.11	0.13	0.24	2.67	2.94	5.61
	Total of all ages	4.10	4.17	8.27	1.00	0.82	1.82	0.20	0.21	0.40	5.30	5.20	10.49

tal defect in these two groups of areas; and for this reason, the figures for urban and rural areas will be discussed separately. We shall refer to the first three areas as the "urban" group, and the last three as the "rural" group; and the discussion of many features of secondary importance will be based upon this classification.

Relative incidence in urban and rural areas.—Table 7 gives an analysis of data relating to urban and rural areas, which is the most accurate for all the groups included in our survey, and therefore we shall base our remarks for the present upon the figures given in this table.

The total incidence of mental defect in urban areas is 6.71, and in rural areas 10.49 per 1,000 total population; that is, the rural incidence is about 56 per cent higher than the urban. A similar difference between urban and rural areas is shown by the figures for adults and children separately; the incidence among adults is 75 per cent higher in rural than urban areas, and the corresponding figure for children is 39 per cent. A marked difference is also indicated by the figures for the higher and lower grades of deficiency. The incidence of feeble-mindedness is 59 per cent and that of lower grade deficiency (imbecility and idiocy) 46 per cent higher in the rural than the urban areas. Although the differences are considerable for both grades of defect, the countryside differs from the town to a greater degree in respect of the higher than of the lower grade of defect.

Before discussing whether this difference of the incidence of mental deficiency is really due to the birth of a larger number of mentally defective children in rural than urban families we shall mention certain extrinsic factors that would cause the ascertainment in rural areas to be higher than in urban areas. . . .

The ascertainment of adult defectives was probably more thoroughly done in rural than in urban areas. Generally speaking, it seems that the conditions of employment in rural areas enable the feeble-minded adult to be more readily recognized. This view is admittedly contrary to that of many observers in this field of study; and on prima facie grounds the mentally defective would be expected to fail more conspicuously in the complex industrial organization of the town than in the simpler rural system. This, however, is scarcely what we found. In the mills, the factories, and the mines of the urban areas there is much more group work than in the rural areas; and it is now being recognized more and more by social workers who endeavor to find employment for feeble-minded adults that these often perform satisfactorily mechanical tasks when working in a group together with normal persons, whereas they fail badly when given some task independent of the group. On a farm there is much less group work than

in the mill, and the farmer soon discovers whether he can rely upon a man to do his work without supervision. A farmer who employed a feeble-minded man for some years said that, although the food was previously mixed in the right quantities by some responsible person, he could not rely upon the defective to feed the cattle. He would either forget to give the food at the proper time, or place it so some animals got much more than others, or he forgot to give the animals water, or in some other way made it impossible for the farmer to relax in his supervision. Such complaints were by no means infrequent. There are large numbers of farmers who can afford to employ only one or two laborers, and, since they find mentally defective adults require more supervision than they have time to give, the farmers are obliged to dismiss them. Although there may be much work upon the farm that requires comparatively little intelligence, there is very little that does not require the capacity of working by oneself. Similarly the mentally defective girl is likely to fail more definitely upon a farm than in a mill or factory in a large town. For this reason, mentally defective adults are frequently more conspicuous failures in a rural setting than in a town, and soon find themselves unemployed. They are then often forced by circumstances to seek the help of some public authority or charitable organization; and in this way they are more likely to be ascertained in the course of an inquiry such as ours than many of the feeble-minded persons in the town who are able to keep their situations in mill, factory, or mine.

The actual numbers of mentally defective persons in rural areas are increased by the tendency of families with mentally defective sons and daughters to move from urban to rural areas. We visited many homes in the rural areas where the father had been a shopkeeper or skilled artisan for the greater part of his life in a town, but when he retired from his business or trade, the family moved to a rural district. There were also several cases of mentally defective children who, while their parents still lived in the town, had been sent to live permanently with relatives in the country district. We are unable to give statistical data indicating the number of cases ascertained in rural areas to which this would apply; we feel sure, however, that we are justified in mentioning this as one of the extrinsic factors that tend to increase the difference between the incidence of mental defect in urban and rural areas.

The high incidence of mental defect amongst adults in rural areas is also partly explained by the fact that mentally defective persons live longer in the country than in the town. The higher rate of child mortality in urban districts would lower the incidence of mental deficiency: mental and physical weakness are closely correlated, especially in the

lower grade cases, and undoubtedly a relatively larger proportion of mentally defective than normal children die at an early age. The greater longevity of mental defectives in rural than in urban areas is also shown by an analysis of the figures in Table 17 (E), which gives the numbers of adults in the various age groups. In the three urban areas only 25 per cent of the mental defectives were over forty years of age, whereas in the three rural areas the corresponding figure was 38 per cent.

Another explanation of the high incidence in rural areas that will probably suggest itself to many readers of this report is that rusticity was in a number of cases mistaken for mental deficiency. The pitfall is so obvious that it becomes its own safeguard. In chapter 2, where we discuss the standards of mental deficiency applied to adults, stress has been laid upon the fact that the defective should be deemed socially inefficient only when judged by the standards of his own social group, and only when his inefficiency is of such a degree and quality that the normal persons of the community in which he lives regard and treat him as simple-minded. If these criteria are applied there should be no confusion of mere rusticity with feeble-mindedness. It should be borne in mind that the names of almost all mental defectives ascertained in the rural districts had originally been given by responsible persons who had spent many years in close touch with rural inhabitants. It is most improbable that the country clergyman, doctor, teacher, relieving officer, or social worker failed to distinguish between rusticity and feeble-mindedness. Moreover, our experience is that the average country rustic, if allowed to talk about things in his own universe of interest, is scarcely less intelligent than the average urban dweller. In our talks with many of the parents or relatives of mentally defective persons in rural areas we found that they were quite as helpful in discussing family histories and in giving information about the patient as those in urban areas.

Even when allowance has been made for the factors we have just mentioned, it seems impossible to avoid concluding from the figures given in Table 7 that the incidence of mental defect among adults is intrinsically higher in rural than urban districts. This conclusion is supported by the data relating to the mentally defective children of school age, in whose case the ascertainment was equally thorough and complete in all areas, and the data are therefore more strictly comparable than those relating to adults. Additional evidence that this difference is real, and not a statistical artifact, is given by the high numbers of lower grade defectives in rural areas. However much the diagnosis of feeble-mindedness in certain cases may be questioned, the imbecile

and idiot are readily recognized; and, as these lower grade defectives are much more common in rural districts, it is to be expected that these districts would also have a higher incidence of feeble-mindedness.

It is only the impetuous reader who will conclude from our data that rural inhabitants as a group are generally inferior in mental endowments to the inhabitants of urban areas. Much more scientific evidence will have to be brought forward before this conclusion can be accepted; and the various social sciences will in time, no doubt, accumulate evidence to establish or refute such a conclusion. It is well to emphasize that our data in themselves do not make this conclusion inevitable. It is possible that the larger number of persons of subnormal intelligence in country areas may be counterbalanced by a correspondingly larger number of persons of superior intelligence. In some counties, which have a mixed urban and rural population, the rural child is said to be more successful in gaining scholarships at the secondary schools than the urban child; and keen observers have stated that genius and talent are to be found much more often in the small towns and rural areas than in our larger towns. If so, it is possible that the average level of intelligence may prove to be much the same in rural as in urban areas; but that, whereas rural conditions tend to exaggerate the difference of intellectual attainments based upon natural mental endowments, the conditions in towns produce a general leveling up of the inferior and a leveling down of the superior mind. Rural life may make for greater diversity and individuality, whereas town life may tend to produce uniformity and conventionality. Moreover, it is well to bear in mind that intelligence is not the only mental factor of importance to the race; a stable, well-balanced temperament may be biologically of greater value than a high mental ratio; and it is possible that rural life has great compensations in this respect. These, however, are theoretical speculations, interesting in themselves, but scarcely pertinent to the main theme of this investigation.

It must be admitted, however, that our data afford sufficient evidence to make further inquiry desirable. A prosperous future in agriculture is impossible if our rural population has an unduly large proportion of men and women of low mentality. Agriculture is becoming more scientific every year; and this trend makes an increasing demand for a higher level of intelligence among all rural workers. Some farmers complain that it is difficult to get men with the necessary technical knowledge and intelligence to manipulate the modern machinery that now is an essential feature of large farms. The agricultural depression of the last century and the phenomenal development of industries in urban areas caused a steady stream of migration from the countryside

to the town; and, in the main, it was the young and virile section of the population that left the countryside. It is not unreasonable to suppose that this section also comprised the more intelligent members of the rural community, as these would be among the first to appreciate the economic and social advantages of life in industrial areas. This selective process has been at work on a large scale in this country for the greater part of the last hundred years. Seventy years ago the urban and rural populations were practically equal but today there are four times as many persons in urban as in rural districts. It is not improbable that the cumulative result of this selective process is that the rural areas have been left with a population containing a relatively large proportion of persons of low mental endowments.

The results of this selective process have taken some time to manifest themselves; but the medical investigators for the Royal Commission of 1906 also noted the disparity of the incidence of mental defect in urban and rural areas. The present investigation, made about one generation later, has yielded data which suggest that the disparity has increased. Therefore, if the incidence of mental defect is really increasing in this country, the increase is occurring chiefly in rural areas. The mental deterioration, if there be any, is not associated primarily with the bad housing and industrial conditions of our large towns—although there is much evidence in our data that these contribute materially—but rather with the biological selective process in our rural districts, where, according to available vital statistics, the conditions are most favorable to health and longevity.

The removal from rural districts of large numbers of families of sound stock would, in itself, increase the incidence of mental defect in the population in these districts even if the actual birth rate of mental defectives remained the same; and, conversely, the incidence of mental deficiency in urban areas would be decreased. If this is all that has occurred there is no cause for anxiety; but the possibility, and even the probability, that the high incidence of mental deficiency in rural districts may be due to two or three generations of selective breeding from the poor mental stock left in these districts should make us apprehensive. The same laws of heredity, according to all the scientific evidence we have, determine the transmission of mental endowments as that of physical features; and it is inevitable that the cumulative effects of inbreeding of a group of persons of low intelligence should result in an increased incidence of mental deficiency. It may be that for the first time in the history of this country the distribution of the population, due to the phenomenal industrial developments of the last century, has become such as to make intensive inbreeding of poor human

stock possible on a relatively large scale. If so, the problem is a serious one. No doubt the new study of rural sociology will do much in the near future to define this problem more clearly and to prove whether the data and assumptions upon which these conclusions are based are really valid.

185. Arnošt Bláha: Peasant Psychology *

Intellectual life in simple country societies is characterized by a comparatively limited number of ideas and feelings, which, however, are deeper, more obstinate, and more traditional than those of other classes. In times of stress they are defended with the fanatical concentration of purpose of the radical countryman. It is well known that the spiritual movements of the country have always been described as more radical than those of the towns.

The tempo of the peasant's life is as peaceful as the tempo of his work—the growth of grain and cattle, the movement of wagons. He asks for little and is satisfied with little, both materially and spiritually. This is apparent in the modesty of his food, lodging, and clothing, as well as in the primitiveness, sometimes even coarseness, of his external manners and speech. Speech is an index for the attentive psychologist. A farmer's speech is truly of the farmyard; the words seem to be heavy with the soil; metaphors are used carefully and sparingly, and when used they are artless and awkward. Even when words are culled from books or are words correct for the written language, they are with broad gestures, which recall the movement of sowers and reapers.

That the peasant is easily satisfied is further apparent in his modest demands for comfort, in the paucity of his relations with his social environment, and in the simplicity of his explanation and understanding of cosmic processes. The human and the social is kept at arm's length, while the natural and the supernatural prevail. Man's understanding and feeling of his relations to the natural and the supernatural is not yet sufficient for either the individual or for society. Hence the sanction of all morality is supernatural (metaphysical) and absolutistic in tone.

We meet here the capitalization of feeling as well as the capitalization of understanding. Spranger demonstrated very clearly that the sentiments of men engaged in agriculture are egoistic. (*Die Lebensformen,* page 36 *et seq.*) The most important thing to the peasant is his life interest; his surroundings are less important to him than his

* From Arnošt Bláha, *Sociologie sedláka a dělníka (The Sociology of the Workman and the Peasant),* Prague, 1925. Translated and printed with the permission of the author.

own ego. He views them from the angle of agricultural success, and inquires how they can consummate his working powers. He uses his working strength in such a manner that he will finally have a net surplus in his favor. The moral qualities of the peasant also enter into his calculation of what he shall do, but only in so far as they are agriculturally significant.[1] Thrift, diligence, skill, love of order, trustworthiness, in short, agricultural virtues, influence his economic affairs.

Zeman, the peasant of Zmin in Želenský's memoirs (L. N. 28:8:24), grasped the pith of the problem when he said to Smah: "You say of the peasant that he cheats, that he is avaricious, that he does not give enough either to servants or to animals, that he defrauds the annuitant, that he is a wastrel, and all that he forgives you. But he does not and cannot forgive you the offensive assertion that he neglects the soil. Surely you also are of peasant blood, and you know what land means to us; it is our life, our spur, our consolation, our refuge. We peasants do not pray to princes but to the land, 'do not let us or posterity perish.'" Here peasant psychology is sketched very adequately, and the central value in the life of a peasant, to which all else is subordinated, is truly emphasized. Let other ideas of life interpose themselves before the seeker after truth; the peasant knows only one truth, one glory, one pleasure, one appetite, and that is land. The respectable and only aim of peasant life is to own land, to assure the inheritance of the soil, and, if possible, to increase the inheritance. No obstacle that peasant perseverance and stubbornness could overcome can be allowed to stand in the way if that end is to be achieved. No exertion must be spared that can bring it about.

The life of the countryman is not a simple one, the contentions of the powers of the earth notwithstanding. Those who wish to go to the country for their literary material err if they suppose that the simple spirit of the countryman will be an easy problem for them. The earth speaks through her children, but she speaks in divers tongues, even though it is always of herself. It is sufficient to compare Helenek (from the *Tales of May*), Maryš, Verunek, and Jaguš (from Reymont's *Peasants*). Or one may compare Jordána (Santa Lucia), Riš, Franck (from Maryš), or recall Marie Gebaurová's *Family of Jurej Klemenčič*. What expanse of peasant vitality, what breadth of peasant soul! But these children of the earth, these animated clods, are always well endowed with violence, quarrelsomeness, and sensuality. From all sides come the intoxicating odors of unfettered passions, the tempestuous flow of the earth's sap, and terrible conflicts between nature and the spirit. And the spirit is never victorious over the body. Land, sensual-

[1] See the quotation from Novotný's Husitism in Chalunýs *Hus' Birthplace*, p. 37.

ity, and the physical always preponderate over the spiritual powers and the soul.

Sexual selection in the country is determined with regard to economy and the land. In this case it is the earth that fetters, despite appearances to the contrary. We meet here what we might call capitalized sensuality, or the capitalization of the erotic feeling. Despite the savage and violent eruptions of the sex instinct, and despite the creative instinct and the overwhelming strength of the erotic feeling, unsuitable marriages are rare in the country. Matrimony is an undertaking to which men and women bring portions as nearly as possible equal.

We do not wish to imply that marriages in the country are never love marriages. But the daughter and the family invariably give preference to the suitor who is the richest, the most diligent, and in consequence the most able to increase the prosperity of the family. If the young man should forget this consideration on his part, the tradition of the family and of the estate would oppose him with all its force; in addition, his father has the power to intervene to prevent him from erring in this matter. Here we find the explanation of the favorite motif of novels and dramas dealing with peasant life—the wealthy peasant resisting the marriage of his son or daughter because of the reasons given above. (Divisek in Jírásek's *Fathers;* Lizal and Lizalka of *Maryš*).

The practical outlook determines sex life to a great extent, and hence sex life is more natural in the country. The peasant of the type of which L'Houet wrote (*Zur Psychologie des Bauerntums,* Tübingen, 1920) does not have time to love curls and sweetness. He is more concerned with his wife's dowry, with the number of the cows, and the extent and fertility of the fields she brings him, than he is with her beauty. He takes a woman for the fulfillment of *socia laborum,* a working mate whose merits are labor, skill, and diligence.

In Vrba's *The Valley,* Michael Gruber goes to the Krutina's to woo, looks in at the stables to see the stock, and then goes in to see his bride. "His palms are full of the warmth of oxen's bodies against which they had been pressed to feel the muscles and sinews; he slaps his bride on the shoulder, pressing her muscles and her sides as fondly as he had pressed the loins of the oxen. The wonder is that his fingers did not snap of their own accord from pleasure! Mariana was a woman of excellent bone, of tough muscles, and of hard sinews. She was equal to a dowry of land sufficient for three day laborers." Here sentiment is not absent, but it is capitalized.

The peasant has a sober outlook on life, its difficulties, and the needs

of the future. Why does he marry? It is not alone to love and be loved. He calculates, first of all, whether the woman is suitable for his farming establishment, whether she is strong and healthy, whether she knows how to do a piece of orderly work, whether she is prepared to do the tasks required of her. If she has these qualities but is ugly or possesses some physical defect, he will forgive her. He also takes into consideration whether she has been reared for farming, and whether she promises well as a housewife and farm wife. This last point is the fundamental one in determining whether or not a marriage will be suitable. Since there is constant inbreeding of individuals with these economic feelings and opinions, it seems probable that the peasants acquire these qualities—and their stability—by selection. In them there is the cumulative tendency of the strong forces of long and suitable selection for a constant, fixed type. These characteristic features of the earth rise innately, as it were, and triumph over all other considerations.

The peasant's view of sexual morality is also natural and unconstrained. Dreamers maintain that morality is more pure and more ideal in the country. But country doctors, teachers, priests, and such unbiased observers of country life as L. Thoma (*Die Bauernmoral,* March, 1908) testify that the country youth taste of the tree of knowledge earlier than the youth of the town. Moreover, they maintain that this is true of the country youth of both sexes. In many regions sex relations are regarded as natural.

Justice is a fine feature of peasant character. The country people know, both from actual experience and from biological observations, that womanhood has its rights, and they recognize women's right to self-assertion. If every unmarried boy must have sexual relations with some girl, the result is not ignominious. In the country they speak of a "child of love"; in the city, they speak of a "child of sin." This difference in descriptive terms exemplifies the difference in attitude very clearly. In several districts of the country it is not at all shameful for a girl to become a mother, but rather otherwise. The peasant has a natural distaste for childless marriages, and he admires a healthy girl who produces children in freedom. But after marriage he takes a practical standpoint.

Of course the question of money is not paramount with the peasant; he considers whether the bride will be a diligent and economical housewife. If she possesses these characteristics, it would be a matter of surprise if she were refused because she was not virginal. Of course there are limits here also. The peasant values marital faithfulness very highly, not because of religious motives, but because he has strong

ideas of domestic honor, dignity, and importance. These latter are really powerful in peasant morality; on them the peasants are united. Everything revolves on the axis of labor and industry; duty and labor, honor, and love are all measured by this standard, and the standard of devotion to the land, and the will of the land.[2]

The relationship of the peasant to his children is characterized by sober and unsentimental love. Work, the farm, and the land are the controlling factors here also. There is no eccentric softness and tenderness; children are handled as the working power of the future, as the future owners of farms. Sometimes such material interests as the care of the farm and of money carry this attitude to the extreme of unfeeling mercilessness. We may cite Jirásek's Divíšeks, Mištik's Lizal and Lizalka, Tůma's Mikulenka, and others.

This same general attitude is characteristic of the relation of the peasant to annuitants and is responsible for their bitter lot. When a man can no longer work, he is useless and should die. Otherwise he is an obstacle, a useless creature who merely eats bread. In spite of the loneliness and the anxious need of their old age, and devoid, as they are, of love and sympathy, the annuitants themselves have this opinion. It is a peasant characteristic and is evident in the daily functioning of the peasant system. L. Thoma has shown very well in his reminiscences of peasant morals that the peasant does not value a peaceful, fortunate, and reflective old age. After he is no longer capable of working, he peacefully awaits death. Peace in death is the real feature of peasant morality. Nothing is more moving than the tranquillity with which the peasants, both men and women, die. They submit without a complaint, for they are reconciled to the law of nature. When their hands are idle it is time for them to be gone. "I am now useless; would that the Lord God would take me." The peasant shows a sense of economy even in death.

On the other hand, the fact that the country families are more self-sufficient, more isolated from each other and from the remainder of the social whole, causes them to live more within the family and thus develops greater family cohesion. The family spirit is more resistant and more concentrated. There is a greater unity of work, interests, opinions, and ideals between the older members of the family and the children.

[2] See Bauer in *Revue internationale de sociologie,* 1906, pp. 3, 220; Charles J. Galpin, *Rural Life,* p. 38; A. L'Houet, *Zur Psychologie des Bauerntums,* pp. 64, 234; L. Thoma, *Bauernmoral,* March, 1908, p. 7; John M. Gillette, *Rural Sociology,* pp. 367, 387; Ernest R. Groves, *Rural Problems of Today,* New York, 1918, especially chap. ii; A. Matual, *Roots in Moravian Soil;* Týž, The Village Drama, Jičin, 1917.

Of course the women of the country, like most women who conduct a house single-handed, have a more complicated and burdensome task. And here we meet something great and beautiful in peasant life: the real cooperation between men and women in their work. The woman is the real mate of the man in work, *socia laborum*. Probably we would not accept as absolutely true the statement of L'Houet (pages 64 and 234) that this cooperation in work could not be found elsewhere in the cultural world, whether among scientists, engineers, manufacturers, or in any other occupation. But it is perhaps true as far as identical work is concerned. The peasant supplies us with the classic example of collaborative work. The woman and the man labor together in one undertaking. Hence there must exist between them a certain bond, a tie, a healthy spirit of family cohesion, and also of mutual equality.

186. A. L'Houet: The Psychology of Peasantry *

Endurance and vitality.—"The health of body and soul, the steadiness of nerves of the peasant is well known. It begins with youth and does not cease with old age. We see the same characteristics in a prominent way in the peasant's later life. It is not possible to arise earlier than he, or to endure more heat or cold, drought or moisture, than he. It is impossible to make an impression on him with such conditions" (pages 7–8). He survives equally well the hardships of dwelling in a poorly ventilated, overcrowded, straw-thatched house, which catches fire all too easily. Again, the composure with which the traditional peasant meets death is remarkable. Altogether, he exhibits such health, sturdiness, and endurance as to astound and disconcert anyone who has not himself grown up in the same environment (pages 9–15).

Traditionalism.—Let us indicate a few points that characterize the persistence of the peasant in retaining his old traditions, such as "continuation on the old place of settlement; preservation of the old homestead and its name; preservation of baptismal names and costumes, of the old dialect, of the old folk poetry. . . . In everything the same conservative idea." Vinzentius' well-known definition of the Catholic church characterizes the peasantry equally well: "What is believed and done eternally by everyone" (pages 16–28).

There are three important characteristics of tradition. In the first place, it is always a product of several coauthors; it represents the joint "work of entire tribes and generations in contrast to the individual labor carried on in entirely cultured places." Secondly, the period over which the traditional material gradually matures and

* Adapted from L'Houet, *Zur Psychologie des Bauerntums*, Tübingen, J. C. B. Mohr, 1905. The parts not within quotation marks are abstracts.

ripens is noticeably long, often extending over hundreds of years, with which may be contrasted the much more rapid production of cultured works. Thirdly, the number of themes treated in traditional creation is extremely small. "The poetry of culture treats everything and uses all forms." It never occurs to the writer of folk poetry to try anything in a new or different way (pages 29–37).

In the case of folk music the same general cooperation holds true. Likewise in weaving, lace-making, clock-making, and wood-carving, so long as the necessity of selling the goods produced does not arise. Fruit culture, which may also be thought of as a folk art, folk medicine, and the peasants' black bread are other instances. "Every farm has its own receipt for making the latter, each with its small peculiarities. . . . Always the old tradition is followed in the scheme of the stated threefold nature: general cooperation, slow maturation, and scarcity of themes" (pages 37–39). "Honoring all that is old—old times and customs—and aversion to all that is new, that is the way of the peasant" (page 28).

Familism.—"The children, and even the hired man and woman, especially if they are elderly, and possibly have long been in the house, have a very considerable right to intervention and consultation. An old servant helps direct the farm with the young owner, so that a person might really ask which was the master" (page 41).

Impersonality.—"The distinction and the pride of the cultured man is his individuality, his personality. But entirely different is the typical peasant. 'Without personality' is not putting it too strongly. The peasant way of living and laboring together creates and preserves this impersonality. In the world of peasantry, even at the present time, not the individual but always the farm is the most important thing" (page 42). "The man of culture nearly always, the peasant never, has the wish to follow individual ways. The latter always desires to go the way of all the others. 'I ask what the most are doing, and then I do likewise.' That is the peasant's maxim" (page 47). "Summing it up: the peasant class possesses individuality, but the psychological characteristic of the individual peasant is impersonality (page 52). The peasant is far from being characterized by the versatility that has always been the distinguishing mark of culture. But what he does produce . . . one can say is . . . extraordinarily good" (page 52).

Stolidity.—"Everyone knows that eating plays a prominent rôle with the peasant. 'The dear eating,' he says with a kind of reverence." Not only is he interested in sufficient food, but it must be solid, substantial food. Aesthetic factors in eating concern him not at all. With clothing and shoes, similarly, durability rather than beauty is of the most importance (pages 53–55).

Frugality.—The frugality of the peasant is well expressed by his proverb: "To earn money amounts to nothing, but to save it, that *is* something" (page 59).

The peasant thinks very little of the public school. One must concur with him in his opinion that he needs a little religion, reading, writing, and figuring, but practically nothing in addition (pages 56–59).

Family interests.—"On what basis does the farmer marry? . . . Not from love. The poetry of love is as strange to him as the kiss. Neither because of a flirtation. That anyone should commence a flirtation and in twenty-four hours find himself tied up! That shall never happen to him. For what reason, then, does he seek his wife? The first consideration is that she be suitable for his entire establishment. Above all things, she must be healthy and strong, willing to work and accomplish something, and able to oversee others in their work. If she be a little homely . . . that is forgiven her" (page 61).

Contribution to arts.—"Possibly the sterling qualities of the peasant appear in the greatest measure in a realm the mention of which may seem strange at the first glance, in literature. 'The peasant's share in the German national literature.' It sounds strange. But it is not insignificant, either in prose or in poetry (page 69). Folk songs, folk sayings, folk fairy tales, folk riddles, and folk proverbs: five words, five worlds" (page 70). Furthermore, there is the folk art found in weaving, carving, painting, and folk plays such as at Oberammergau (page 71). The peasantry is everywhere characterized, for the most part, by sterling inward qualities, rugged self-reliance, and strength, which is something entirely different from merely having strong nerves. This spiritual excellence of the peasant is his greatest characteristic (page 73).

Sincerity.—Naïveté is another important characteristic: the unrestrained revelation of both the good and the bad of a soul's content; natural simplicity in form of speech; harmony between inner and outer life; the absence of politeness, but also of deception and hypocrisy; the lack of decoration and ornamentation. Quite opposite are the characteristics of the typical man of culture (pages 71–86).

Imagination.—The inexhaustible realms of supernaturalism play a very important part in the life of the peasant: legends of heroes, gods, and spirits; superstitions and beliefs about dragons, spirits, and devils; the vast lore of folk medicine; and above all, the realm of religion (pages 90–100).

Man of "three-quarters power."—"The peasant is in his entire mode of life a man of three-quarters power. . . . Every fourth part belongs to rest. He holds with tenacity to the observance of all the great resting times that he has reserved for himself: the Sabbath, the night, the

holiday, and the winter. He will not be deprived of them. He does not protect them with the power of law, but with his stubbornness and persistency, which allow no change. . . . He protects them even when culture does not utilize them" (page 106). He has the capacity to endure idle time in a way entirely impossible to people in the city. The latter have made a cult of the most intensive forms of work, disregarding the harmful effects of such overexertion, and failing to observe the "great and powerful achievements that the peasant has always attained by means of his three-quarters power" (pages 111–113).

Freedom.—"Freedom makes for moderation . . . just as, on the contrary, compulsion makes wild (page 137). Man needs bread so that his body may live. He requires religion so that his spirit may live. Where he finds in these respects what he absolutely needs, there is freedom for him. To have satisfied the necessities that the inner nature demands, from the desires of the body to the wishes of the conscience, that is freedom for man. It is indisputable, however, that it is to be found in no other class as much as in the peasant class" (page 139).

Youthfulness of the peasantry.—It would be profitable to study the historical origins of the nature of modern peasantry. In such a case it should be pointed out that the agricultural branch of German life has been "a separate stratum, which, in contrast with culture, has had its own tempo and type of development. Germany's agriculture, constrained through all its inner and outer conditions, lives more slowly, develops more slowly than all culture. Therefore, in many respects, it stands today where culture stood in the Middle Ages. There is the same difference between youth and age, between the Middle Ages and modern times. . . . In the main this is the same difference that exists today between agriculture and culture. We would point this out as the key that unlocks for us an intrinsic understanding of this difference" (pages 143–164).

Piety.—The peasant's stronghold is in the supernatural world. He has not come to the belief that man can live without God and without religion, a belief that the city man and the man of culture long ago accepted. The last two still have plenty of churches and theology, but these are not religion. Culture has given people a distaste for it. There is no godless youth; godless old age, on the other hand, is frequent. As is old age, so is culture; as is youth, so is agriculture. "The reverence of all the peasantry for God and divine things, in a measure that culture never knows, is everywhere evident to us. The typical peasant is in his soul not only a strongly conservative, but also an exceedingly religious man. The peasantry is decidedly Germany's most religious class, and, at the same time, in possession of the soundest religion (pages 169–177). But the Bible is no longer the peasant's book of ref-

erence. The culture that has passed beyond it has taken the Bible out of the peasant's hand. He confines himself, unlike his predecessors, to the song and prayer books" (page 178). "In his religion is to be found the peasant's greatest strength. Riehl must have known what he proclaimed fifty years ago: 'The future of Germany must rest with the peasant, on account of his religious foundation especially" (page 182).

Farmers' God.—"It has often been pointed out that God created man in his own image, but man also creates God according to man's own nature. It is plainly visible that culture reads an easy God out of the Bible, while the peasant reads a more severe God out of the same book" (page 186). The conception of a tremendous atonement is entirely acceptable to the theological system of the peasant because a similar condition obtains in a number of other realms of life.

"The complete transference of a burden, such as the transference of illness from one person to another, occupies an enormous place in all peasant superstition and in folk medicine. For example: a sick man takes an egg in his hand, and then lays it in the street; whoever picks it up receives the disease; the sick man becomes well" (page 188). . . . The idea of the impersonality of the individual and the participation of the whole group, of a greater or smaller community of men, is always repeated . . . . The suffering, and so on, which affects this community must be borne; that is of importance. Who bears it, is immaterial. More or less anyone who belongs to the community may have to bear it. Suffering, disease, and health are things entirely impersonal, but are essentially transferable" (page 190).

The peasant believes simply and does not interest himself with the intricacies and sophistications of theology. He accepts "every miracle of the New Testament—Christ's preexistence, His Virgin Birth, every single miracle done by His own hand: there is no shadow of a doubt, no thought of its impossibility on the part of the typical peasant (page 193). Let us admit once for all the uselessness of all modern theology for the peasant, for the peasant's pulpits" (page 196).

Narrow mental horizons.—"It has often been said that the peasant is incapable of thinking in historical terms. It is the same with things political and geographical. For the typical peasant, especially the owner of an estate, there is nothing but his farm with which he is entirely familiar . . . (page 200). Politics, the constitution, the nation, and even humanity are all rather strange to him, not very authentic. He possesses, like all youth, an extremely narrow horizon. He has, in addition, an aversion to extending that horizon . . . (page 203). His thoughts regarding literature are well known. For example, if a judge or a pastor would tell the peasant that he understood Hindu and

Persian as well as German and Latin, it would leave the latter entirely unmoved: the man has studied; who studies learn everything. . . .

"It has been said that the peasant distrusts everybody but himself. It is doubtless true. It is because his vision does not extend beyond his estate . . . (page 206). Who would become a good peasant has no time to permit his eyes to wander in strange fields" (page 210).

Woman's position.—"The greatest severity permitted by culture is aimed at the woman, by the fact that culture makes her relatively superfluous. Woman for thousands of years has been created for the home. It is the woman's world. And this home is disbanded by culture, which robs her of her domestic haven and directs her, instead, to all kinds of public occupations outside her natural sphere". . . (page 219). On the other hand, "the farmer, reaching marriageable age, needs a wife. When he takes charge of his estate he is not confronted with the two questions: shall I marry at all, and shall I marry immediately? He has no freedom in the matter. It is simply this: you must, and that at once!" (page 225.)

Morals.—"One would hardly be exaggerating regarding our entire higher culture, if one claimed that it operates only in a very limited measure with a real conscience . . . (page 227). Conscience has become a beautiful archaic decoration, which is often brought to view, with which culture would not like to dispense, but in which it no longer believes. But things are entirely different in agriculture, where, up to the very present, conscience plays at every step a markedly stronger rôle . . . (page 228). Conscience is the old 'voice of God in man'" (page 232).

The home is the true sphere of the best type of peasant. His benevolence is known only within very narrow limits. To everyone outside his sphere he may exhibit indifference, sullenness, and taciturnity. "Good nature, fair dealing, and neighborliness are customary for the peasant; mere well-wishing is the way of culture" (page 241).

We are prone to characterize peasant behavior as stupid, insensible, lacking in perceptive or expressive ability, whereas it may better be regarded as an expression of "the same moderate speed of living, the same deep calm, and the same insensibility to slight injuries that are characteristic of all genuine good health" (page 248).

Peasant and the Middle Ages.—"Comparison makes all things clear. We have often referred to the Middle Ages. Let us draw a comparison again in a more complete way: the peasant as a youthful folk-stratum, and the Middle Ages as the youthful period in the development of an entire people. In the first place is health. The similarities are self-evident. Then there is eating and drinking: the Middle Ages likewise

received great satisfaction in eating. And just as with eating and drinking, thus, also, with sexual desires. It is well known that wherever there had been a monastery soon developed a seat of immorality. Again, with regard to food, a valuation on the basis of quantity, not on quality, in contrast to all culture . . . (pages 249–253). Similarities are just as apparent in the case of supernaturalism. Impersonality, likewise . . . (page 254). Then there is the matter of three-quarters strength both of the peasantry and the Middle Ages. One recalls, among many other things, the waging of war in the Middle Ages, when man desisted from fighting and conflict during religious holidays and the Peace of God . . . (page 259) One could extend the comparison to the smallest details; the endless dirtiness of both; the cleaning of the streets before every procession in order that the procession would not come to a standstill. The Middle Ages exhibit the whole gamut of peasant characteristics and do not show one of the distinguishing points of our culture" (page 263).

"As in the case of the Middle Ages, the peasantry may also be compared with all half-cultured (semicivilized) peoples". . . (page 263). There are, likewise, many similarities between peasantry and the world of childhood (page 275). Nor is it difficult to find passages in the Old Testament portraying all of the peculiar characteristics of the peasant" (page 289).

A few words may be said in conclusion. "The peasantry of Germany is disappearing." In many regions the people would like to sell their land, move to the city, and spend the remainder of their days in peaceful laziness. "There is no more pitiful sight than this earthborn aristocracy of the land, connected with the soil in a way entirely different from the possessors of great estates, as it sinks down into a dubious city existence, to the cultural proletariat" (page 295).

"It remains as true that there is a two-fold wisdom to learn: to prevent youth from becoming aged and to preserve nature from culture. Old age and culture both come of themselves. Not only of themselves, but certainly, relentlessly, and all too soon. In either case an attempt to hasten the process, or failure not to try to retard it in every way, would appear to be very unwise."

"The peasantry is to be considered as, essentially, the great and indispensable supply of physical, mental, moral, and religious youth and health of a people and is not to be treated in such a way as to be overlaid with culture" (page 306).*

* Editors' Note.—In a very similar way Dr. Francesco Coletti characterizes the peasants of Italy. See Francesco Coletti, *La popolazione rurale in Italia,* Piacenza, 1925, pp. 69–70, 121–145.

187. Riccardo Bachi: The City and the Distribution of Illiteracy *

We propose to examine the phenomenon of illiteracy in the zones around the city of Turin. We shall use the census of 1911 for our data.

Elementary instruction has been widely and regularly diffused in this territory. The percentage of illiterates in the population six years of age and over is quite low, while the divergence between large cities and small communities is much less than in other territories in which the percentage of illiterates is higher.

The average percentage of illiterates among the population six years of age and over is as shown for the four zones:

Zones	Male and Female	Male	Female
Commune of Turin	5.00	4.00	6.00
10 km. [from Turin]	8.11	7.09	9.10
10 to 20 km.	8.49	7.24	9.72
20 to 30 km.	8.52	7.10	9.84
30 to 40 km.	10.56	8.77	12.18

Thus the frequency of illiteracy becomes greater as one proceeds from the center of the city to the zones farthest removed from the center. The variation becomes more evident, especially in regard to females, if we arrange all the single communes within each given radius from the city serially and then compute the relative percentages of illiteracy for the extremely low, the first quartile, the median, the third quartile, and the extremely high.

Zones	Male and Female	Male	Female
10 km.			
Extremely low	4	4	5
First quartile	6	5	7
Median	8	6	8
Third quartile	9	8	10
Extremely high	10	7	12
10 to 20 km.			
Extremely low	2	1	3
First quartile	6	5	7
Median	8	7	9

* Riccardo Bachi, "Influenze demografiche della grande città sul territorio circostante," *Giornale degli economisti e rivista di statistica,* XLIX, 389–392 (1914).

Zones	Male and Female	Male	Female
Third quartile	9	8	11
Extremely high	14	15	14
20 to 30 km.			
Extremely low	2	2	2
First quartile	7	4	8
Median	8.5	6	10
Third quartile	10	9	11
Extremely high	16	16	17
30 to 40 km.			
Extremely low	4	3	4
First quartile	8	6	10
Median	10	8	11
Third quartile	13	10	14
Extremely high	17	15	23

Furthermore, we may consider the number of communes within each zone that have certain given proportions of illiterates. The following table gives the number of persons per 1,000 who live in communes with given proportions of illiterates. We see that, in general, the communes with high rates of illiteracy become relatively more frequent as we proceed farther from the city.

Thus the diffusion of instruction appears to be more intense in the neighborhood of large cities.

Number of Persons Living in Communes with Given Percentages of Illiteracy, per 1,000 Persons in Each Zone

Percentage of Illiteracy	10 Km. Zone	10–20 Km. Zone	20–30 Km. Zone	30–40 Km. Zone
Males and Females				
6 and under	147	170	125	78
7 to 8	369	319	447	196
9 and above	484	511	428	726
Males				
6 and under	427	368	456	163
7 to 8	418	405	349	316
9 and above	155	227	195	521
Females				
6 and under	105	134	69	29
7 to 8	301	181	258	64
9 and above	594	685	673	907

PART FIVE

RURAL-URBAN SOCIAL RELATIONSHIPS

CHAPTER XXI

A COMPARISON OF FARMER-PEASANTS AND OTHER SOCIAL CLASSES

A. THE FIELD OF RURAL-URBAN RELATIONSHIPS

The subject of rural-urban relationships may be divided into a number of problems for discussion. One of these is the field of the relationships and attitudes of farmers and peasants towards the city classes and towards the city in general. The basic significance of this problem can be understood only when there is a clear idea of the fundamental conditions distinguishing farmers and peasants as a social class from other social classes. In the following pages the chief characteristics of the farmer-peasant class are given. The discussion considers the similarities and differences between this class and various urban classes, and it gives the basis for the analysis of the conscious and unconscious attitudes of antagonism and cooperation between the country and the city, and the rural and city classes.

A discussion of the problem of migration follows this analysis of the farmer-peasant class. The chapter on migration attempts to describe the distinctions in the relationships of the social classes of the town and the country and the important factor in the spread of rural culture into urban districts, and of urban culture into rural districts.

The chapter on the cultural relationships of city and country deals with other forms of rural-urban relationships. In it the relative division of labor between town and country in the creation of culture and their respective rôles in the life cycles or history of any particular society are discussed. These three chapters attempt to cover the principal phases of rural-urban relationships.

B. ANALYSIS OF THE FARMER-PEASANT CLASS

I. DEFINITION

The population engaged in agriculture is not homogeneous, but is rather differentiated into several strata, those of owners,

tenants, and laborers. In previous chapters special attention has been given to this differentiation and stratification within the agricultural population.[1] In this chapter the class as a whole is considered in its similarities and dissimilarities to other classes. In this discussion the absentee landowners, the great landowners, and incidental farm laborers are excluded from the farmer and peasant population, because these are different from the bulk of the agricultural population and are only an insignificant portion of it. An analysis of this sort is necessary because it explains the attitudes of rural people towards other classes and the lines of policy in various historical periods.

In such an analysis a definition of the term "social class" is necessary. In contemporary sociology there are no standard and generally accepted concepts of a social class.[2] As the term is used here, it represents the total number of individuals whose occupational, economic, and socio-political status (rights, privileges, duties, and disfranchisements) are similar.

Each of these "social coordinates" is a very important factor in determining and shaping the behavior and relationships of an individual or of a group of individuals. It is certain that a man's economic position, his wealth or poverty, and his occupation exert a great influence on his behavior, psychological reactions, relationships, and destiny. They also affect his allegiance to a privileged social class or his attitude towards one from which he has been disinherited.[3] If each of these elements is an important factor in man's behavior and relationships, the combined rôle of all three factors is still greater. Practically, man's economic, occupational, and socio-political positions are responsible for most of the traits of his acquired personality. Directly and indirectly three-quarters of such traits as education, manners, customs, beliefs, tastes, convictions, ideas, traditions, and so on, are determined decisively by these three factors. This is true of any group. The old proverb may be paraphrased to read: "Tell me what is the occupation, economic status, and the socio-political position of a person or

[1] See chaps. vi, vii, viii, and ix.

[2] For a survey and analysis of the principal definitions of the term "social class" see Pitirim A. Sorokin, *Sistema Soziologii* (Russ.), 1920, II, 283–306, and additional literature cited in Pitirim A. Sorokin, *Contemporary Sociological Theories*, New York, 1928, pp. 542–543. See also Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology*, New York, 1929, chap. iii.

[3] See Pitirim A. Sorokin, *Sistema Soziologii* (Russ.), Vol. II, *passim*.

of a group and I will tell you what are the peculiarities—the behavior, psychology, antagonisms, solidarities, and other important characteristics—of that person or that group."

II. OCCUPATIONAL STATUS

What are the special occupational characteristics of the farmer and peasant class and what are the occupational relationships and similarities of this class to other important social classes? A concise inventory of the fundamental occupational features of the farmer-peasant class follows.

1. *Nature of the occupation and occupational environment of farmers and peasants from the technical and economic standpoint.*—Agriculture is the collection and cultivation of plants and animals. In its nature and occupational milieu it differs sharply from every other occupation—that of capitalist, professional worker, industrial laborer, absentee landlord, or even great landowner. In these respects the farmer-peasant class differs equally from all other groups and may not be thought of as being more similar to or more different from one than another. In its essential characteristics the nature of the occupation and its milieu remain the same for all strata of the agricultural population—farm owners, tenants, and laborers; the contrasts are much less pronounced than the contrasts between the upper and lower strata of other occupations, as, for instance, in manufacturing, mining, trade, and many professions where the jobs of the boss (e.g., Henry Ford) and of his workers are very different.

The fundamental technical and economic peculiarities of agricultural industry, in contrast to other industries and pursuits, may be summed up as follows.

(a) Industrial operations are based mainly on the laws of mechanics, physics, and chemistry. Agricultural production is more complex and is based on the laws of mechanics, physics, chemistry (hydraulics, machinery, fertilization, and so forth), geology and soil science (analysis of soil and its formation), bacteriology (fermentation and diseases of plants and animals), plant pathology, animal pathology, biology, and other sciences.

(b) Agricultural production is carried on in a natural environment, whereas other industries are carried on in an artificial environment. Therefore, agriculture depends on natural conditions much more than do the other industries. It is harder, moreover,

to give continuity to the productive processes in agriculture than in industry, because agricultural production depends on the weather, the seasons, day and night, and other natural phenomena. In industry a series of different operations are performed simultaneously; in agriculture there is a definite sequence of operations determined by the season, for one cannot seed the soil in winter nor take a crop in the spring (except a few crops like winter wheat). Moreover, because of these natural factors any preliminary computation of the course, expense, plan of work, and economic result is much less possible than in other industries. The great dependence on natural conditions and the frequent interference of disturbing forces make any prediction of the amount of crop much less accurate and more problematic in agriculture than in other industries, for the forces of nature are not under control by man as are the forces and factors in industrial production.

(c) In other industries production consists mainly of the transformation of dead or inorganic matter, which may be more completely controlled by the producers. In agriculture the process depends upon living organisms that grow or change, for the most part independently of man and his activity. The soil produces plants by virtue of the biological laws of growth and not by virtue of man's activity. Man can only facilitate or check these processes; he is generally incapable of changing the natural forces that determine the biological processes of growth, maturation, decay, and so on. Agriculture is, therefore, less dependent on man's control and more dependent on nature than are the other industries.

(d) The basis of production in agriculture is land and the forces created by land. In other industries land furnishes primarily only the space for their operation.

(e) There are other peculiarities of this means of production; for example, land cannot be created by man; it is limited in area and amount; it cannot be moved easily in great quantities from place to place; its quality cannot be changed greatly by man, at least over a sufficient area for agricultural operations, because to fertilize or water vast areas of desert or to change the soil and climate of the polar regions in order to make them suitable for agriculture is a task that is generally economically absurd.

(f) It is supposed that the law of diminishing returns operates more sharply and limits more definitely the increase of the efficiency of agricultural production accompanying any increase of the investment of labor and capital on a given unit of land. This is partly due to the physical properties of soil itself and partly to the inelastic demand for agricultural products.

(g) Agriculture admits of much less division and specialization of the operations of production than other industries. For this reason, the factor of efficiency of production as related to the amount of human labor expended is less important.

(h) Agriculture cannot utilize large machines nor fix their location in one place as is done in a factory, for instance, nor generally replace men by machines as easily as many other industries do.

The above discussion is sufficient to indicate substantial differences between the technical economic nature of agriculture and many other industrial occupations.[4] As a man—in his physical, vital, and psycho-social characteristics—is stamped considerably by his occupational work and milieu, so agriculture naturally stamps farmers and peasants with characteristics somewhat different from those of persons in other occupations.

These peculiarities of agriculture exist even in such countries as the United States and younger countries where the capitalistic nature of agricultural production is more highly developed than on the Continent or in Asia. A study of the correlation between the changes in production and the demand for pig iron (as an

[4] For a detailed analysis of the technical peculiarities of agriculture see Friedrich Aereboe, *Agrarpolitik, ein Lehrbuch,* Berlin, 1928, and *Allgemeine landwirtschaftliche Betriebslehre,* Berlin, 1923; Eduard David, *Socialismus und Landwirtschaft,* Berlin, 1903; Hatti, *Socialism and the Agrarian Problem,* 1906; N. Suchanov, *The Problem of the Evolution of Agriculture* (Russ.), 1909, and *The Agrarian Problem and Marxism* (Russ.); N. Bykhovsky, "The Limits of Capitalism in Agriculture," *Borba sa Semliu (Struggle for Land),* 1908, I, 1–83. See also Henry C. Taylor, *Agricultural Economics,* New York, 1921; John D. Black, *Introduction to Production Economics,* New York, 1926; George A. O'Brien, *Agricultural Economics,* New York, 1929; Thomas N. Carver, *Principles of Rural Economics,* Boston and New York, 1911; Lewis C. Gray, *Introduction to Agricultural Economics,* New York, 1924; *Handbuch der Landwirtschaft,* ed. by Friedrich Aereboe, J. Hansen, and Th. Roemer, Berlin, 1928–1929; Edwin G. Nourse, *Agricultural Economics . . . ,* Chicago, 1916; Clarence L. Holmes, *Economics of Farm Organization and Management,* Boston, 1928; Gustav Fischer, *Die sociale Bedeutung der Maschinen in der Landwirtschaft,* Leipzig, 1902; Alex Lang, *Die Maschine in der Rohproduktion,* Berlin, 1904. See also chap. vi of this work; Fred R. Yoder, *Introduction to Agricultural Economics,* New York, 1929; Georg Stieger, *Der Mensch in der Landwirtschaft,* Berlin, 1922; and also the works in the field of classical and neoclassical economics, especially those of Marshall and Ricardo.

example from an industry the changes in production and wholesale prices in agriculture does not reveal the existence of a close correlation between these variables. The same study shows that agricultural production depends much more upon natural than upon human factors.[5]

The technical pecularities of agriculture also result in a very great difference in time budgets between farmers and workers in other occupations. The duties of most of the other social groups are more or less unchanged throughout the year, whereas those of the farmers and peasants differ according to the season.[6]

Industrial operations are not usually influenced by the weather, but agricultural operations are. While there are certain seasonal urban occupations, the agricultural tasks are much more definitely marked. Ordinarily they are much more strenuous in summer and less strenuous in winter. The total hours spent annually in various activities by the farmer and by other occupational workers differ conspicuously. Although there are very few studies relating to this, the difference is evident. Even in contemporary Russia, where the differences should be less, the existing studies show it. According to the study conducted by Strumilin

NUMBER OF HOURS SPENT IN ACTIVITIES BY PEASANTS AND CITY WORKERS IN RUSSIA

ACTIVITIES	MALE		FEMALE	
	City Worker	Peasant	City Worker	Peasant
Production	2,582	2,082	2,451	1,934
Walking and driving to place of work	250	118	175	93
State duties	6	141	...	...
Household duties	700	552	1,778	2,408
Marketing and buying	74	104	218	6
Self-education and social activities	378	401	354	19
Eating	600	485	452	542
Recreation	342	211	401	240
Religious activities	18	107	44	173
Sleeping and resting	3,690	4,439	2,767	3,224

[5] See Russell C. Engberg, *Industrial Prosperity and the Farmer,* New York, 1927.

[6] See the table of the seasonal sequence of the main agricultural operations of farmers in New England a century ago in John M. Phelan, *Readings in Rural Sociology,* New York, 1920, pp. 1–13; and that of contemporary Russian peasants in M. J. Fenomenov, *Sovremennaia derevnia* (*The Contemporary Village*), Leningrad, 1925, I, 256 ff. See also the hundreds of bulletins on technical farm management in America and Europe.

and Larin,[7] the annual time—8,640 hours—was spent by supposedly typical peasants and workers as shown in the table. Although the table is very defective [8] and clumsy, obscuring many important differences, nevertheless it shows the point.

Studies of the time budgets of farmers and city people are not yet sufficiently developed to enable us to draw any general conclusions other than that the two types of production require different distributions of time. The time budget itself reflects the technical nature of the occupation, and it gives us an insight into a phase of the occupational characteristics of the farmer-peasant class. The psycho-social aspect of the work of farmers and peasants follows.

2. *Psycho-social character of the occupational functions or work.*—From this standpoint occupational workers may be divided roughly into three principal groups. The first of these includes proprietors or managers or independent masters who organize and control an enterprise, whose work requires initiative and intellectual ability and carries financial and other responsibility. The managers are liable to risk of loss but they receive profit. Another class is that of qualified employes who are connected also with the organization and control of the enterprise but under the supervision of a proprietor or head, and who, besides, perform many purely mechanical, subordinate, and purely manual tasks. This group is intermediate between the proprietors and laborers; some of these employes closely approach the status of the proprietors, and others that of the laborers. A third class is composed of laborers whose work is purely mechanical, a mere execution of orders planned and given by the proprietors and qualified employes; it is mostly manual, neither requiring nor utilizing initiative or real thought, and involving no powers of organization or control whatever.

The farmer-peasant owner and tenant represent a mixture of all these three categories—masters, employes, and laborers of the

[7] S. A. Strumilin and I. Larin, *Time Budget of the Russian Worker,* and Larin, *Soviet Village* (Russ.), Moscow, 1925, pp. 358 ff. See also Ina Z. Crawford, *The Use of Time by Farm Women,* Idaho Agricultural Experiment Station Bulletin No. 146, 1927; John O. Rankin, *The Use of Time in Farm Homes,* University of Nebraska Agricultural Experiment Station Bulletin No. 230, 1928.

[8] The defects in this table are due partly to the fact that it was compiled for the purpose of propaganda—to show the Russian peasants, who had been complaining about the idleness and privileged position of the city workers under the Soviet régime, that the workers are as busy as the peasants.

enterprise. They do everything for the enterprise: they organize and control it and bear its financial responsibilities; at the same time they are their own laborers; even though some of them have a few hired laborers, the farmer-peasants themselves perform many of the purely manual and subordinate functions of a laborer. In this respect most of the agricultural class occupies a peculiar position quite different from that of capitalists, employes, and laborers in other occupations.[9] In attitudes, conduct, sympathies, solidarities, and antagonisms, the farmer-peasant class belongs neither to the labor class nor the proprietorial upper class of society. At one time the farmer class joins with the labor class and at another with the proprietorial class. This means that an attempt to create a "farm-labor union" may succeed as well as a "farm-capitalist union." History reveals that the farmer-peasant class sometimes associates itself with labor, against the capitalists; sometimes with capitalists and the proprietorial class, against labor; sometimes it opposes both capital and labor.

Thus, in all these characteristics, the peculiar occupational status of the farmer-peasant class differs from that of the other social classes. Proofs of these statements as to the type of work performed by farmers may be found in the readings and in the references that summarize the studies of the farm business in America, England, Denmark, Switzerland, Finland, and Russia.

In addition, the typical psycho-social characteristics of farmer-peasant work are given in the conclusions of a psychologist who has made a careful study of several hundred farmers in order to discover those traits most conducive to success. His conclusions are as follows:[10]

1. He should have slightly more, at least, than the average physical ability of the community. His strength and endurance need not be extraordinary, but he cannot be a weakling.

[9] Compare Stuart A. Rice, *Farmers and Workers in American Politics,* Columbia University Studies in History, Economics, and Public Law, Vol. CXIII, chap. ii (1924), and *Quantitative Methods in Politics,* New York, 1928; F. Kraut, *Die Personlichkeit des Betriebsleiters als Intensitätsfactor für die landwirt. Betriebe,* Hanover, 1929; and W. Seedorf, *Vervollkommnung der Landarbeit,* Berlin, 1919.

[10] Edgar C. Higbie, An Objective Method for Determining Certain Fundamental Principles in Secondary Agricultural Education, doctor's thesis, Columbia University, pp. 45–46. See also Adam Smith's characterization of the nature of the husbandman's occupational work in chapter i of this work; Charles J. Galpin, *Rural Life,* New York, 1918, chap. i; A. U. Moeller, "Lie ländliche Leibesübungen," *Journal für Landwirtschaft,* LXXVIII, 309–327, 1930; K. Kleinknecht, *Mensch, Arbeit und Leistund in der Landwirtschaft,* Göttingen, 1930, and the readings in chaps. vii, viii, and ix of this *Source Book.*

2. He has a certain advantage if endowed with some generalized mechanical ability; but if too highly specialized it probably works against, rather than with, certain other necessary qualities.

3. He needs to be possessed of some considerable amount of technical information—working facts available for quick and easy application.

4. He needs to have a fund of rather definite, specialized farm skills, like pitching hay and bundles to advantage, shouldering sacks of grain with ease, and harnessing and handling two-, four-, or six-horse teams quickly and effectively.

5. He is coming to be a business man able to meet neighbors and townsmen in transactions that do not leave him behind in the game. In connection with or supplementary to this buying and selling characteristic, he needs certain abilities in keeping records and accounts, giving him a basis for determining costs, profits, etc.

6. Fundamentally, he must be a manager. Herein he approximates the industrial manager more than the industrial worker, differing chiefly, perhaps, in the fact that he deals relatively more with things and less with men.

7. Finally, so far as this study has data to determine, he must have a high degree of native intelligence—an intelligence probably more or less specialized, directly conditioning his skills, his ability to "pick up" technical information, and his managerial power.

III. ECONOMIC STATUS

Economic status is determined by four important factors: (a) ownership of machinery or land by a man or a group, that is, ownership of the means and instruments of occupational enterprise and activity and of some immovable property; (b) the amount of wealth and income; (c) the economic standard of living; (d) the nature of the sources of income; i.e., interest and profits, rent, and labor wages. These are the four coordinate criteria of the economic status of a man or a group.

1. *Proprietorial status.*—Farm owners and peasant owners are for the most part proprietors, being the owners of land, houses, and farm equipment. The percentage of owners within the agricultural population (including tenants and farm laborers) is higher than in any other large occupation—higher than in manufacturing, mechanical pursuits, mining, trade, transportation, and even, in some countries, than in professions. This can be seen from the tables below.[11]

[11] Computed from the Abstract of the Fourteenth Census of the United States, 1920, pp. 483, 490–496, 925.

PERCENTAGE DISTRIBUTION OF PROPRIETORSHIIP BY OCCUPATION IN THE UNITED STATES

OCCUPATION	OWNERS, PROPRIETORS, AND FIRM MEMBERS	EMPLOYES AND LABORERS	TOTAL OCCUPATIONAL POPULATION
Agriculture excluding tenants	37.5	62.5	10,953,158
Agriculture including tenants*	60.6	39.0	
Manufacture and mechanical pursuits	2.5	97.5	10,812,736
Mining	2.0	98.0	1,084,796
Trade	37.0 †	63.0	4,242,979
Clerical work	Nonproprietorial occupation	100.0	3,126,541
Transportation	1.4 ‡	98.6	3,063,582
Public service	Nonproprietorial occupation	100.0	770,460
Professional service	Unknown	Unknown	3,142,889
Domestic service	Unknown	Unknown	3,404,892

* According to the estimate of the National Bureau of Economic Research, when the number of farmers is assumed to be identical with the number of farms, we have 73.2 per cent of farmers and only 26.8 per cent of employes and laborers. See *Income in the United States, Its Amount and Distribution, 1909–1919,* Vol. II, New York, 1922, pp. 61, 33.

† Includes bankers, brokers, money-lenders, officials, managers, retail dealers, undertakers, wholesale dealers, importers, and exporters. This is a population considerably more numerous than the class of real proprietors.

‡ Includes managers of transfer companies.

PERCENTAGE DISTRIBUTION OF PROPRIETORSHIIP BY OCCUPATION IN IMPORTANT EUROPEAN COUNTRIES

COUNTRY AND OCCUPATION	EMPLOYERS AND INDEPENDENT OWNERS	EMPLOYES AND LABORERS	INDEPENDENT WORKERS
England and Wales, 1921			
All occupations (males)	4.9	88.8	6.3
Agriculture	11.7	76.6	11.7
Mining	0.1	99.8	0.1
Metal work	2.2	95.5	2.3
Textile work	2.2	97.5	0.3
Transportation	1.1	96.0	2.9
Commerce, finance, and insurance	15.5	61.5	23.0
Clerical work	0.0	99.9	0.1

PERCENTAGE DISTRIBUTION OF PROPRIETORSHIP BY OCCUPATION IN IMPORTANT EUROPEAN COUNTRIES—*Continued*

COUNTRY AND OCCUPATION	EMPLOYERS AND INDEPENDENT OWNERS	EMPLOYEES AND LABORERS	INDEPENDENT WORKERS
Professional service	7.7	78.1	14.2
Mixed group	0.04	99.6	0.3
Germany, 1907 (both sexes)			
All occupations	23.1	76.9	
Agriculture, forestry, etc.	25.3	74.7 †	
Industry	17.5	82.5 †	
Commerce, transportation, and innkeeping	29.0	71.0 †	
Public and professional service	...	... †	
Belgium, 1920 (both sexes)			
All occupations	30.4	69.6	
Agriculture	52.9	47.1	
Industry	2.4	97.6	
Commerce	21.2	78.8	
Denmark, 1920 (both sexes)			
Agriculture	82.4	17.8	
Industry	27.6	72.4	
Commerce	46.9	53.1	
Transportation	20.6	79.4	
Poland, 1921 (both sexes) (Department of Polesie)			
Agriculture, forestry, etc.	96.0 *	4.0	
Industry and mining	68.0 *	32.0	
Commerce	89.0 *	10.8	
Transportation	13.7 *	86.1	
Public service	17.1 *	82.3	
Personal service	9.9 *	90.0	
France, 1906 (males)			
Agriculture, forestry	46.0	36.4	17.6 (*isolés*)
Industry	12.2	69.7	18.1
Commerce	26.7	52.4	20.9
Professional service	3.1	87.5	9.4
Domestic service	0.0	100.0	0.0

* Including persons assisting in their own families.

† In a different computation, excluding domestic members of the family, the percentage of employes and laborers is given as follows: in agriculture, 36; in industry, 82; in commerce, 67; and in public service and professions, 57. Paul Krische, "Die soziale Schichtung der Erwerbstätigen im Zeitalter der Dampfmaschine und in dem der Elektrizität," *Zeitschrift für Völkerpsychologie und Soziologie,* IV, 17 (March, 1928).

Furthermore, because of juridical and other conditions many groups of tenants in many countries and at many historical periods have practically the status of a peasant owner.[12] In this respect the social status resembles that of the proprietorial classes in other occupations. In other words, the farm class as a whole approaches more nearly the status of the classes of capitalists and owners of various enterprises than that of the classes of laborers, employes, and clerks, who are not the owners of the businesses where they work but only sell their labor and receive wages or salaries, and who do not work with their own machinery. In this respect, there is also a very sharp difference between the labor class and the bulk of the peasant class. Inasmuch as ownership is an important factor in determining the behavior, solidarities, and antagonisms of the group, the argument suggests that the farmer-peasant class will not be united, for any great length of time, with the industrial labor class against the owning or capitalistic class. Theoretically such unions will last only a short time and may be replaced by a union of the farmer-peasant class and the urban proprietorial class against the urban labor class; or the rural class may oppose both of these urban classes.

Numerous studies show also the exceedingly great amount of immovable property (land and houses) belonging to the farmer class. The proportion of owners of immovable property is practically the highest of all the great occupational classes.[13] This state-

[12] See Werner Sombart, *Der moderne Kapitalismus,* Munich and Leipzig, 1927, Vol. II, Part II, p. 651. See also chaps. vi and viii of this work; Arthur W. Ashby and J. Morgan Jones, "The Social Origin of Farmers in Wales," *English Sociological Review,* 1924, p. 21; M. Leopold, "Statistik der Berufswechsel," *Allgemeines Statistisches Archiv,* Vol. XIV, p. 131; Yearbook of the United States Department of Agriculture, 1923, pp. 527–556. In North Carolina it was found that 27.8 per cent of the white owners had been croppers, and 38.4 per cent tenants. Among the colored owners 65.8 per cent had been croppers and the same proportion tenants. See Carl C. Taylor and Carle C. Zimmerman, *Economic and Social Conditions of North Carolina Farmers;* E. A. Willson, H. C. Hoffsomer, and Alva H. Benton, *Rural Changes in Western North Dakota,* North Dakota Agricultural Experiment Station Bulletin No. 214; Lewis C. Gray, Charles L. Stewart, Howard A. Turner, J. T. Sanders, and W. J. Spillman, "Farm Ownership and Tenancy," Yearbook of the United States Department of Agriculture, 1923; B. H. Hibbard and Guy A. Peterson, in the University of Wisconsin Agricultural Experiment Station Bulletin No. 402, 1928; George H. von Tungeln, "Some Observations on the So-called Agricultural Ladder," *Journal of Farm Economics,* January, 1927; E. D. Tetreau, "Agricultural Ladder in the Careers of 610 Ohio Farmers," *Journal of Land and Public Utility Economics,* August, 1931; J. L. Hypes and J. F. Markey, *The Genesis of Farming Occupation in Connecticut,* Storrs Agricultural Experiment Station Bulletin No. 161, 1929.

[13] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 63 ff., and the following sources: Census of England and Wales, 1921, London, 1924, section on "Occu-

ment is confirmed by the figures on the ownership of dwellings in rural and urban communities in the United States, Norway, and Sweden.[14]

In Bavaria, Norway, and Poland the percentage of the population actively employed who are proprietors and independent employers is greater in rural communities, and the percentage of the employed workers without property is greater in the urban communities.[15] In these studies the data are arranged by size of community rather than by occupation, but the results substantiate the theory.

2. *Wealth and income.*—Although the agricultural class is for the most part proprietorial, nevertheless the average wealth and income of the class is not high; it is somewhat lower than that of the city population. It is more evenly distributed and there are not the great contrasts of exceedingly rich and exceedingly poor individuals—contrasts that mark urban distribution of wealth and income. Finally, the average income and wealth of the farmer-peasant owners fall much below those of the city proprietorial classes, being more nearly equal to those of the urban labor classes. These are the principal peculiarities of the distribution of wealth in the rural class.

The amount of wealth and income is one of the important factors in the behavior, social antagonisms, and solidarities of any group. The farmer-peasant class in this respect approaches much nearer to the poor urban labor classes than to the upper proprietorial urban classes. In consequence it more easily consolidates with them against the urban and rural classes of wealth. If the rural class had been more like the lower urban classes in other respects, the farmer-labor union would have been strong and durable. We have already seen, however, that in other respects the rural class is more like the rich proprietorial urban

pations," pp. 2–19; *Statistisches Jahrbuch für das Deutsche Reich,* 1926, p. 14; *Annuaire statistique de la Belgique,* 1924–1925, p. 33; *Statistisk Aarbog* (for Denmark), 1927, pp. 14–21; *Annuaire statistique de la République Polonaise,* 1924, p. 25; *Annuaire statistique* (of France), 1910, pp. 11–14; Krische, *op. cit.,* p. 17.

[14] Statistical Abstract of the United States, 1926, p. 42; Weber, *op. cit.,* p. 425; *Statistisk Aarbog för kongeriket Norge,* 1924, pp. 178–180; *Statistisk Årsbok för Sverige,* 1926, p. 200.

[15] See the *Statistisches Jahrbuch für den Freistaat Bayern,* 1919, p. 30; the *Statistisk Aarbog för kongeriket Norge,* 1924, p. 17; Krische, *op. cit.,* p. 17; and the *Annuaire statistique de la République Polonaise,* 1924, p. 25.

classes than the urban labor classes. This often interferes with unions based on similarities of income and wealth of the farmer-peasants and the urban laborers and causes differences in the policies of the two classes.

There are abundant proofs of these contrasts between farm income and wealth and urban income and wealth. The table below gives the proportions of rural and urban incomes that were above $2,000 in the United States during the period from 1910 to 1919.[16]

PERCENTAGE OF ALL RURAL AND URBAN INCOMES ABOVE $2,000 IN THE UNITED STATES, 1910–1919

YEAR	FARMER	ALL OTHER
1910	7	37
1911	5	35
1912	7	35
1913	7	35
1914	7	34
1915	11	37
1916	21	40
1917	44	41
1918	55	36
1919	58	35

These figures indicate that, on the average, the nonfarming classes had higher incomes. Of course, during the War there was an upward movement of farm incomes that placed more of them above the $2,000 mark, but if the table were computed on the $3,000 limit, it would show a smaller percentage of incomes above that figure among the farmers as a class. We cannot give here detailed definitions of income or analyze the validity of these figures. There are adequate proofs of the understatement of farm incomes, but in the main the corrections would not disprove the point.

In one of the best studies yet made of the whole problem of distribution of income, the federal trade commission has furnished the actual values of probated estates in rural, town, and

[16] These data are from National Bureau of Economic Research, *Income in the United States,* Vol. I, 1921, p. 112. No criticisms are given here of the validity of the figures. For a criticism see A. G. Black, Wealth and Income of the Farmers in the United States, unpublished doctor's thesis, University of Minnesota, 1927; and John D. Black's paper on the same subject in the *Harvard Economic Review,* 1928.

city counties. In the period from 1912 to 1923, 24 counties were visited, and all estates probated in these counties during this period were investigated. The counties were later divided into rural (9 with no town above 5,000) and town counties (10 with cities of more than 5,000).[17] This study may be taken as fairly representative, since it is based upon 43,512 estates in 24 widely separated counties and covers a period of eleven years. It presents these chief conclusions: The extremes of wealth are in the towns and cities. The normal type of distribution is to be found in the country districts. Estates under $500 comprised 7.9 per cent of the total number in the country, 12.7 in the towns, and 15.2 in the cities. On the other hand, those above $100,000 comprised 1.2 per cent of the total number in the country, 1.3 per cent in towns, and 2.5 per cent in the cities. But the extreme concentration of wealth in cities is most clearly shown by comparing the proportions of total wealth found in probated estates above $100,000 in particular types of areas. In rural counties it was 16.8 per cent, in towns 31.0 per cent, and in cities 57.4 per cent. The average value of the estates in city districts was $16,990, in town districts $10,070, and in country districts $13,950. The proportion of property that was in realty, as opposed to personal property, was 50.6 in rural counties, 41.9 in towns, and 30.6 in cities. Personal or more mobile property increases with urbanization.[18]

Certain studies have been made of incomes and expenditures in Minnesota that permit some comparison of the averages of urban social groups with those of rural groups. A summary of the results of these studies follows:[19]

The first glance seems to indicate that the urban families, on the whole, had greater net spendable incomes. In comparison with the net spendable income of $3,878 for the average of the urban families, the rural family had an income of $2,124, after paying farm "costs of production." These amounts yield $1,173 per adult unit for the urban families and $560 per adult unit for the farm families. The difference in size of family, averaging one-half an adult unit, tends to reduce the amount of spendable income per adult unit on the farms still more.

[17] See United States Senate Executive Document No. 126, 69th Congress, 1st session, pp. 59 ff.

[18] *Ibid.*, p. 64.

[19] See Carle C. Zimmerman, in the University of Minnesota Agricultural Experiment Station Bulletin No. 255, pp. 35 ff. and *passim*. See also Bulletins Nos. 234, 240, 246, and 253.

The distribution of expenditures gives an average of $1,193 per urban adult and about $640 per farm adult unit.

But these figures do not tell the full story. The farm cash income and expenditures are low because of the possibilities for direct appropriation from nature of many of the items in their living, such as food, house rent, and fuel. Compensating for these items, in an urban comparison, is a very difficult process. The single-family dwelling, with its peace and quietness, its large lawn and comparative safety for children, is something which may be purchased in towns only with the expenditure of large sums of money. The greater quantities of food consumed by farm families, as many studies in America and Europe have shown, are difficult of evaluation. The easiest and best all-round comparison seems to be in the amounts available or spent for savings and nonphysiological living purposes (other than food, clothing, and household purposes). By elimination of other items of expenditure, the following results are achieved. The urban families spent an average of $2,295 for investments and nonphysiological living expenditures, or an average of $695 per adult unit compared with an average of $1,616 for the farm families or $425 per adult unit. Thus by gross comparison it appears that in terms of arithmetic averages the urban families have 42 per cent more net spendable incomes for items other than physiological necessities; in terms of adult units, this percentage increases to 63. . . .

The results show that farmers, without regard to retired farmers who must also be considered as farmers, were considerably better off than the laborers, artisans, and broken families (who together comprised 51.1 per cent of the urban populations). On the other hand, they were not as well off as the three upper classes (managerial, professional, and business). But careful analysis of these groups shows that they were composed of extremes in distribution of wealth and incomes, so that their apparent high average incomes were the result of the great amounts in a few families. In the managerial group, the range of incomes was from $1,060 to $18,600; in the professional group, from $1,420 to $26,500; and in the business group, from $1,055 to $26,550. Our conclusion from these data is that, in spite of the apparent high average incomes of the city population, farmers are really better off both as to incomes and standards of living than the lower two-thirds of the urban population.

The same conclusion is to be reached from a comparison of the property accumulated by the rural and urban groups, either for the whole group or for the specific age groups. The average farm family had accumulated a total of $13,700 in property compared with $15,200 by the average urban family. These studies suggest that the lower four-fifths of the farm families are certainly in as good a condition, if

not better, than the lower four-fifths of the town families. Such a result could only be attained by a high development of definite attitudes with regard to the function of savings, accumulations of property, and the future. It indicates that the farm families are to be differentiated from the lower urban classes in the ideals with which they view the distribution of expenditures.

What has just been shown for America[20] is true for Europe. The Swedish study of the households of 372 rural families in 1920 (200 workers paid partly in cash and partly in produce, 43 tenants, 86 day laborers not owning land, and 43 day laborers owning land) disclosed an average revenue of 3,783 crowns. This is quoted at length in the readings. Laborers in towns during the year 1914 (multiplied by the index number of prices in 1920) received on the average 4,987 crowns per family. The studies showed a revenue of 1,002 crowns per unit of consumption in the rural districts and 1,504 in towns. Out of their income the rural families spent 365 crowns for cattle, forage, tools, and so on, which left them 3,418 crowns per household, or 903 crowns per consumer unit. In the rural districts 61 per cent of the total was cash and the rest of the income was derived from natural products either given them by their employers or secured from their farms. In towns most of the income was in money. These studies were based on household account books. However, the publications state that on the whole the urban laborers selected for the studies represented families in better than average cir-

[20] For additional data on the United States see W. J. Spillman, *The Farmer's Income,* United States Department of Agriculture, Bureau of Plant Industry, Circular No. 132, 1913; all the studies of the National Bureau of Economic Research, including the two special reports on agriculture; the studies by Ellis L. Kirkpatrick published at Cornell University and in the publications of the United States Department of Agriculture; Thomas N. Carver, *Selected Readings in Rural Economics,* Boston, 1916; Charles B. Spahr, *An Essay on the Present Distribution of Wealth in the United States,* New York, 1896; Willford I. King, *The Wealth and Income of the People of the United States,* New York, 1915; E. H. Thomson, "Profits That Farmers Receive," Annals of the American Academy of Political and Social Science, November, 1913 (reprinted in Carver, *op. cit.*); E. A. Goldenweiser, *The Farmer's Income,* United States Department of Agriculture Farmers' Bulletin No. 746, 1916; John D. Black, "Division of the Income between Landlord and Tenant," Proceedings of the American Association for Agricultural Legislation, December, 1919; David Friday, "The Course of Agricultural Income during the Last Twenty-five Years," *American Economic Review,* Supplement, Vol. XIII (March, 1923); Lewis C. Gray, "Accumulation of Wealth by Farmers," *ibid.;* and various United States Department of Agriculture bulletins and other studies. For a good critical analysis see the unpublished doctor's thesis of A. G. Black at Minnesota, cited. See also Alvin H. Hansen, "The Effect of Price Fluctuations on Agriculture," *Journal of Political Economy,* XXXIII (April, 1925), and B. H. Hibbard and B. W. Allin, in the University of Wisconsin Agricultural Experiment Station Bulletin No. 393, 1927.

cumstances. After these families were omitted from consideration, the remaining 351 typical urban laboring families were found to have higher incomes. But the prices of products were not as high in rural areas as in towns. Furthermore, the rural classes were better fed, as indicated by the greater number of calories per unit of consumption and the greater amount of dairy products, fresh meat, butter, and other essential foods.[21] The same relative differences apply to Denmark,[22] Japan,[23] Belgium,[24] Great Britain,[25] France,[26] and Russia.[27] It may therefore be assumed that the situation found to exist in Sweden is general.[28]

A careful study of reports that has been made for conditions in Sweden in 1920 gives information concerning differences in income and wealth of the rural and urban population according to occupation and substantiates the conclusions already reached.[29]

[21] See *Levnadskostnaderna på landsbygden i Sverige, vid år 1920,* Swedish Bureau of Labor, under the direction of Gunnar Huss, Stockholm, 1923; *Levnadskostnaderna i Sverige, 1913–1914,* Del. 1. K. Socialstyrelsen, 1921; and *Livsmedsförbrukningen inom mindre bemedlade hushåll under krisåren, 1914–1918,* Stockholm, 1922. See also the *Statistisk Årsbok för Stockholms Stad,* 1914, pp. 275–281. This yearbook gives tables from the studies made in Stockholm in 1907 and 1908 and compares them with Marcus Rubin's data on rural groups in Denmark and with statistics on some other urban groups.

[22] Marcus Rubin, "Consommation de familles d'ouvriers danois," *Bulletin de l'Institut international de statistique,* Vol. XIII, 1903, Part III, pp. 21–80.

[23] Kokichi Morimoto, *The Standard of Living in Japan,* Johns Hopkins University Studies in Historical and Political Science, 1918, Series 36, No. 1.

[24] Benjamin S. Rowntree, *Land and Labour; Lessons from Belgium,* London, 1911, pp. 346 ff.; A. Slosse and E. Waxweiler, *Enquête sur l'alimentation de 1065 ouvriers belges,* Brussels, 1910, pp. 161 ff. Édouard Ducpétiaux reached the same conclusions in 1855. See his *Budgets économiques des classes ouvrières en Belgique,* Brussels, 1855.

[25] Benjamin S. Rowntree and May Kendall, *How the Labourer Lives: A Study of the Rural Labour Problem,* London, 1913; and *The Cost of Living of Rural Workers,* Report of the Committee on the Occupation of Agricultural Land, Great Britain Agricultural Wages Board, 1919. Some scattered data for England are given in Arthur L. Bowley and Josiah Stamp, *The National Income, 1924: A Comparative Study of the United Kingdom in 1911 and 1924,* Oxford, 1927.

[26] See an early study by Alfred de Foville, "The Wealth of France and Other Countries," *Journal of the Royal Statistical Society,* LVI, 609 (1893).

[27] S. A. Pervushin, "Essays in the Theory of Mass Consumption," *Economist* (Russ.), 1922, Nos. 4, 5.

[28] For other studies and a bibliography see Martha Epps, Comparison of Rural and Urban Incomes, unpublished master's thesis, University of Minnesota, 1927; Carle C. Zimmerman, "The Family Budget as a Tool for Sociological Analysis," *American Journal of Sociology,* XXXIII, 901 ff. (May, 1928). No discussion is given here as to the causes of this difference. In his doctor's thesis, previously cited, A. G. Black shows that part of this difference per capita is due to the different age distributions in town and country. For further analysis of differences in age distribution, see Nathan P. Levin, "A Statistical Study of the Economic and Sociological Significance of Population Age," *Journal of the American Statistical Association,* XXIII, 40 ff. (March, 1928).

[29] Figures were computed from the tables in the *Statistisk Årsbok för Sverige,* 1925, 1926, and 1927. See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* p. 73.

An additional analysis of the rural and urban distribution of capital based upon this study yields the following conclusions concerning the active population: 30.3 per cent of all in the country had some taxable property, but only 16.2 per cent of those in the cities had taxable property. Thus, more of the city population owned no property. However, those in the cities who did have property had more than those in rural sections. The property of 585 out of every 1,000 owning property in rural districts was valued at less than 10,000 crowns. For the cities the comparable figure was 498. Only about 5 of each 1,000 property-holders owned property in the country valued at more than 200,000 crowns, as compared with 44 per 1,000 who owned that much property in the cities.

A study of Russian conditions during 1923–1924, which is not based on as reliable data as the data for Sweden, however, indicates the same correlation between urbanization and increase of income. This investigation points out the differences in the distribution of wealth in rural and urban districts. The great majority of the urban incomes are at the bottom of the scales of incomes, in spite of the attempts of the Soviet government to destroy the high-income classes and improve the economic conditions of the poor workingman. Additional studies, summarized in this article and elsewhere, show that the differences in rural standards of living and incomes vary much less than would appear from the table of distribution of land under cultivation already given.[30] Finally, the table below, which presents the distribution of incomes of all gainfully employed in the rural communities and cities of Finland for the year 1924, substantiates these arguments.[31]

3. *Standards of living.*—If general economic measures are used as indicators of the standards of living of a group, the average standard of the rural population is lower than that of the urban. In the analysis presented in the following pages we limit the concept of the standard of living to the manner and quantity in which economic goods are consumed. The nonmaterial or cul-

[30] L. N. Litoshenko, "The National Income of the Soviet Union," *Quarterly Journal of Economics,* XLII, 70 ff. (November, 1927). The data dealing with the ranges of food consumption are given in *Ten Years of Soviet Power in Figures* (in English), official publication of the Central Statistical Board of Soviet Russia, Moscow, 1927.

[31] Computed from the *Annuaire statistique de Finlande,* 1928, Helsingfors, p. 242. The same table gives data on the distribution of wealth but these data were not computed as above. The table is based upon compulsory income tax reports of all adults.

DISTRIBUTION OF INCOMES IN FINLAND, 1924

INCOME IN MARKS	NUMBER OF INCOMES		PERCENTAGE OF INCOMES	
	Cities	Rural Districts	Cities	Rural Districts
Less than 6,000 (nontaxable)	1,540	4,977	7.9	3.5
6,000	1,386	42,658	7.1	29.7
9,000	2,281	53,777	11.6	37.5
15,000	5,067	33,825	25.8	23.6
30,000	2,948	4,889	15.0	3.4
45,000	1,791	1,586	9.2	1.1
60,000	1,302	678	6.7	1.2
75,000	898	364	4.6	1.2
90,000	1,274	410	6.5	1.2
135,000	432	113	2.2	1.2
180,000	492	117	2.5	1.2
360,000	96	25	0.5	1.2
540,000	86	24	0.4	1.2
Total	19,593	143,443	100.0	100.0

tural elements in the farmer-peasant standard of living are analyzed in other chapters of this work. The proportion of the budget used for nonphysiological expenses averages less in the country than in the city. It is generally assumed that the proportion of the budget expended for items of current consumption other than so-called basic necessities is the best index of the level of living. Whether or not this is a proper standard cannot be decided here. But it is a fact that the proportion spent by the rural classes for items other than maintenance is smaller than the average amount spent by urban groups, and the rate of increase of this sort of expense in proportion to the increase of income is generally slower in the country. Furthermore, the standards of living among the various groups that comprise the rural population—owners, tenants, croppers, and laborers—are more homogeneous than those of the urban classes. The urban standards of living in the various social classes are differentiated from the rural by "conspicuous and wasteful consumption." The rural standards of living approximate those of the lower urban classes more closely than those of the upper and especially the professional and upper proprietorial classes. This is particularly noticeable if sav-

ings for the future are omitted from consideration. It is one factor that gives the farmer-peasant class more solidarity with the lower than with the upper urban classes in the so-called class struggle. However, there are other factors entering into the interclass relationship that partly annul the effect of similarity of standards of living.

Rural standards of living or household budgets have their own peculiar characteristics that differentiate them from urban standards of living. Rural living depends more upon nature and less on the market place, especially for food, household necessities, and fuel. Much of the expense of these items is saved in the spare time of the farm family. In a great many cases the spare time of the family—the labor of the women and the children and, after working hours, of the head of the household—has little, if any, market value. Even if it were not used in gardening, gathering fuel, or attending to the upkeep of the house it could hardly be sold or marketed even through increased farm production. Furthermore, garden produce and fuel also have little market value; they cannot be sold. This direct consumption of food produced from the land leads to a greater use of coarse foods in place of the refined foods consumed by city dwellers. The living of farmers and the business of the farm are not differentiated; they can be separated only in a most arbitrary and unrealistic manner. The surplus spendable income of the farmer-peasant class is first distributed between business and living expenses before the individual items of living are given consideration. This procedure is not so true of the urban classes, where business and home life are much more widely separated. There is an old adage among farmers that "a good barn will build a good house quicker than a good house will build a good barn." Because of this combination of business and home life and of numerous other factors, such as family mores and so on, farmers have more concern for the future than the average urban worker, and more of their income is saved and invested for the future. The result is that, even with smaller incomes, there is much less community and state support of the aged among the rural classes. The poorhouse, widows' pensions, and old-age allowances are primarily urban institutions. The rural environment which determines the distribution of individual budgets and the standards of living differs con-

siderably from the urban environment. The rural classes are adjusted to this environment, and therefore they cannot be judged by urban standards. Neither can urban people be judged primarily by rural standards.

Clothing, as an item in the budget, illustrates this last point well. A smaller variety of clothing is required in the country. Most of it is work clothing, which is standardized and is unaffected by changes in style, and there are other differences in clothing needs. As a result, a fair comparison cannot be made of the proportions of the budget spent for clothing among city and country groups. A similar situation prevails with respect to recreation expenditures in towns, where recreation must be purchased to a greater extent than in the country. The greater daily leisure, coupled with the monotony and the debilitating influences of urban life, undoubtedly requires more recreation and diversion. The same standards of expenditure or participation in commercialized recreation cannot be applied fairly to both classes. This is also true of rural religious, political, moral, and other needs. Rural people, as we have seen, are satisfied by the "homemade" things that do not involve much expense and therefore do not enter as items into the rural budget in the degree that they enter into urban budgets.[32]

Another illustration is food consumption. The rural classes need more food, because they do more physical work and live outdoors. They consume more food in the course of a year, but it is of a different quality. They eat more bread, potatoes, and vegetables. In America and other countries the rural classes probably consume more meat and more dairy and poultry products than the urban classes.

The foods of the rural classes are "comprehensive" foods as contrasted to the refined foods of the urban classes; that is, the rural classes as a rule consume whole grains instead of the white and refined products made from only a few of the elements of the grain that the city people eat. They consume at any single period of time more of the organs of an animal, because it is generally butchered at home and must be consumed with the characteristic frugality of farmer-peasants. Urban people buy only

[32] See chapter xv, which discusses rural aesthetic and recreational organization, and chapters xiii, xiv, and xvi, which give additional details on social control and religious and political organizations.

specific parts of the animal; they may buy the same cuts of meat day after day, whereas the rural family must consume the whole animal within a short time or it will spoil. The urban classes are said to have more variety in their diet, although this variety is often secured with a diet deficient in calories and vitamins. As regards food standards the upper urban classes must be differentiated from the lower urban classes, because the upper classes approximate more closely and as a rule surpass the rural classes.

With these general theories in mind, let us now turn to an analysis of farmer-peasant family budgets and standards of living to discover whether existent conditions confirm the theories.

4. *Family budgets and standards of living.*—A budget is a record of income and expenditure; ideally it includes a description of the sources from which the income is derived and shows the sorts of items purchased as well as the purpose of the expenditure. The family budget presents a picture of the economic standard of living of the family. It also gives some index of those phases of the standard of living that may be styled as noneconomic in that they are not translatable into money but yet serve to satisfy the desires of the family. Family budget studies that compare rural and urban standards of living were first made several hundred years ago. At present they are so numerous that it is impossible to give details or readings from all of them here. Consequently we shall limit ourselves to an outline of the more important ones and refer to the others in the footnotes. By this method a larger number can be summarized in a small space than by any other method.

Not all these studies give full details as to the entire family budget. Some give only the income and investment expenditures; others give the income and farm expenditures; still others omit incomes and list a limited number of expenditures; and, finally, the most limited studies give only one type of expenditure—food. However, these generally make up for their limited range by presenting data on the types of food and also by analyzing the quality and nutritive value of the food. In this part of the discussion the farm income and its sources are omitted, because they are discussed elsewhere in this work.

The first budgetary studies analyzed the welfare of societies and the contributions of various classes to the well-being of the

GREGORY KING'S ESTIMATE OF ENGLISH FREEHOLDERS AND FARMERS AS ACCUMULATORS OF PROPERTY

CLASS	NUMBER OF FAMILIES	AVERAGE SIZE OF FAMILY	YEARLY INCOME PER FAMILY		YEARLY INCOME PER PERSON		YEARLY EXPENSES PER PERSON			YEARLY SAVINGS PER PERSON		
			£	s.	£	s.	£	s.	d.	£	s.	d.
Increasing the wealth of the kingdom	500,586	5.33	68	18	12	18	11	15	4	1	2	8
Decreasing the wealth of the kingdom	849,000	3.25	10	1	3	3	3	7	6	0	—4*	—6
Freeholders of the better sort	40,000	7.00	91	0	13	0	11	15	0	1	5	0
Freeholders of the lesser sort	120,000	5.50	55	0	10	0	9	10	0	0	10	0
Farmers	150,000	5.00	42	10	8	10	8	5	0	0	5	0
Shopkeepers and tradesmen	50,000	4.50	45	0	10	0	9	0	0	1	0	0
Artisans and handicraftsmen	60,000	4.00	38	0	9	10	9	0	0	0	10	0

* A minus sign indicates that expenditures are more than earnings.

group as a whole. The first study recorded was an analysis of conditions in England presented by Gregory King in 1688. King was attempting to classify the populations of England according to whether their efforts added to the social wealth or detracted from it. In order to achieve this, he drew up tables based upon a sample of the population of each class in the kingdom, and then expanded these tables to include the whole kingdom.

The people of England were divided into two classes, those adding to the wealth of the kingdom (500,586 families) and those decreasing the wealth of the kingdom (849,000 families). "Farmers," "freeholders of the better sort," and "freeholders of the lesser sort" were included among the 500,586 adding to the wealth of the kingdom; 50,000 families of common seamen, 364,000 laboring families and outservants, 400,000 cottagers and paupers, 35,000 common soldiers, vagrants, gypsies, thieves, and beggars constituted the group who actively decreased the wealth of the kingdom. The substance of his computations is shown in the accompanying table.[33]

Farmers were classified with the better group because they added to the wealth of the kingdom in spite of the fact that they had larger families to support than the shopkeepers and artisans. These data, although they present mere estimates of a few of the items generally analyzed in such studies as these, gave the English farmer in 1688 a much higher position in the social community than the laborer. His position at that time does not seem materially different from the position of the farmer in the United States.

The next important group of studies was that of the Le Play school.[34] Le Play's purpose was to attempt to understand the constitution of a society and the essentials of social reform by studying family organization through the budget. He published an excellent study by the case method of a limited number of typical families. His studies were continued by his followers. As Le Play and his followers were chiefly interested in certain

[33] Frederick M. Eden, *State of the Poor; A History of the Labouring Classes in England, with Parochial Reports,* London, 1797, I, 228.

[34] Frédéric le Play's results are summarized in *Les ouvriers européens,* 2d ed., Paris, 1877–1879, 6 vols. See the readings in chapter x of this *Source Book,* where a sample of Le Play's monograph on the family budget is given. The statistical details of the budgets collected by the Le Play school are to be found in two sources: E. Cheysson and Alfred Toqué, "Les budgets comparés des cent monographies de familles. . . ," *Bulletin de l'Institut international de statistique,* Vol. V, 1890, and Ernst Engel, "Die Lebenskosten belgischen Arbeiter-Familien früher und jetz," *ibid.,* Vol. IX, 1895, Appendix.

phases of the budget of a noneconomic character, we do not give any of his conclusions here. They are given in other chapters of this work. Let us return to the results of later students who followed the practice of King and the Political Arithmeticians in attempting to reduce the budgets to averages for the study of mass consumption.

At a meeting of the International Statistical Congress in 1853 a plan for the classification of expenditures was first adopted. The purpose of this scheme was to enable the budgets of families to be handled in groups according to the types of expenditures and the amounts used for each type. This classification consisted of three such groups: the physical and material; the religious, moral, and intellectual; and the "luxurious and improvidential." The group of physical and material expenditures included all items of food, rent, clothing, bed-clothing, heat, light, hygiene, furniture, medical care, household insurance, taxes, correspondence, laundry, tools for the trade or occupation, occupational expenses, such as dues to organizations or unions, and the costs of the garden, or the home production of food. The religious, moral, and intellectual group included expenditures for churches, schools, apprenticeship, books and reading material, contributions to moral, intellectual, and charitable societies, mutual societies and insurance, and savings. The luxurious and improvidential expenditures included those for drinking, such as the expenses connected with cafés, saloons, and so forth, expenses for tobacco, toilet articles, gambling, theaters, fêtes, and public (commercialized) recreation, and expenses connected with pawnbrokers and usurious loanbrokers.

With this classification in mind, Édouard Ducpétiaux of Belgium gathered the first large group of family budgets since the days of the estimates of the Political Arithmeticians.[35] However, Ducpétiaux did not analyze these figures with a view to arriving at theories of mass consumption or standards of living. Rather, he presented his data separately for each family. The study was limited to wage earners, including the poorest peasants and some of the small tenant farmers.

The first attempt at classification of budgets with the idea of arriving at theories of mass consumption was made in 1857 by

[35] See the summary of this and the details in Édouard Ducpétiaux, *Budgets économiques des classes ouvrières en Belgique.*

Ernst Engel, who was also under the influence of Le Play's work. He took the budgets gathered by Ducpétiaux in 1853 and some presented by Le Play in the first editions of *Les ouvriers européens* and arranged them according to size of income and type of expenditures. In order to correct his computations for variations in size of family (previously this had been done by picking representative families, such as those with two parents and three children under fifteen years of age) Engel developed a new adult-equivalent scale.[36] This adult-equivalent scale was an attempt to weight the younger members and the women of the family on the basis of the nutrition they required. The working adult male was taken as the unit. Today the actively employed adult male between the ages of 20 and 60 is taken as 1.0 and the others as parts of 1. A young male about 16 years of age is thus weighted as more than 1, because at that time he requires more nutrition. Engel, however, used a somewhat different system of denoting these weights. As his basis he took a child of one year of age or less as 1 and added one tenth (0.1) of a point each year until 3.5 was reached for the male and 3.0 for the female, after which the adults were weighted the same. Engel called this the "Quet" scale, because it was based upon some tables of physiological growth developed by Quetelet, the famous mathematician and statistician. This scale has since been somewhat modified by the work of Atwater in the United States and others in Europe. However, to this day "food adult-equivalent scales," as they are called, are practically alike. Any large group of families will give about the same weights no matter which scale is used.[37]

In these statistical studies Engel first developed two laws or

[36] For the details of this development see Ernst Engel, "Die Productions- und Consumtionsverhältnisse des Königreichs Sachsen," *Zeitschrift des statistischen Bureaus des königlich sächsischen Ministeriums des Innern,* November, 1857, Nos. 8, 9. This is reprinted in the *Bulletin de l'Institut international de statistique,* Vol. IX, 1895. In this same volume may also be found the last and most important study of Engel under the title "Die Lebenskosten belgischen Arbeiter-Familien früher und jetz." These two studies are the sources of the following characterization of Engel and his works. Contrary to the claims in many popular works and texts based on secondhand sources, Ernst Engel, the sociologist and student of family budgets, is not Friedrich Engels, co-worker of Karl Marx in the writing of the *Communist Manifesto* and socialist organizer and agitator in Europe.

[37] These adult-equivalent scales are compiled and compared in the work by A. Slosse and E. Waxweiler entitled *Enquête sur l'alimentation de 1065 ouvriers belges.* See also Edith Hawley, *Dietary Scales and Standards for Measuring a Family's Nutritive Needs,* United States Department of Agriculture Technical Bulletin No. 8, 1927; International Labor Office, *Methods of Conducting Family Budget Enquiries,* Geneva, 1926, pp. 45 ff.

principles of budgetary distribution, which he characterized as follows: "As the income of the laborer increases, his food expenditures increase in geometric ratio." Another statement is that "with increasing income the proportion used for food decreases and the proportion used for miscellaneous expense increases."

These laws or principles were based upon a study of both the urban laboring groups and the poorer peasants. Engel thought of these laws as general principles of consumption applicable equally to both groups. They were originally stated in this form in the study of 1857. In his later and more comprehensive study of 1895 he did not emphasize this statement of the specific laws but considered them as expressing the relationships between the proportions spent for food and "all other" expenditures or, what is more exact, a competition between a physiological type of expenditure and a nonphysiological type (a competition among current expenditures).[38] In this general expression the theory stands today, having been tested many times by studies of well-fed laboring groups in society. It has not been verified as far as the other groups are concerned. Engel divided his families into three groups: working families below the poverty line, partly supported by charity; working families just breaking even; and finally, those working families who managed to save a little each year.

Since the time of Engel's study budgetary studies have become more specialized; some agencies have made studies of the wage earners and small-salaried classes in cities and others have studied the rural budget. Some agencies have studied both, as, for instance, Marcus Rubin in Denmark in 1897, the Swedish Statistical Bureau in 1920, and the University of Minnesota. The first two studied primarily the lower classes in the cities and rural districts. On the other hand, a great number of studies of portions of the

[38] For an analysis and criticism of the validity of this measure of the standards of living, see the University of Minnesota Agricultural Experiment Station Bulletins Nos. 246, 253, and 255. See also Carle C. Zimmerman, "The Family Budget as a Tool for Sociological Analysis," *American Journal of Sociology,* XXXIII, 901 ff. (May, 1928). See especially Charles E. Lively, Family Living on Selected Ohio Farms, a doctor's thesis submitted to the University of Minnesota in 1930, to be published by Ohio State University as an Agricultural Experiment Station study. See also W. A. Anderson, *Factors Influencing Living Conditions of White Owner and Tenant Families of Wake County,* North Carolina Agricultural Experiment Station Technical Bulletin No. 37, 1930.

agrarian budget were made by the students of farm management, who based their conclusions on data collected from statistical surveys in America and from the account books kept by various European farmers at the request of their own organizations or governments. Among the best of these farm management studies are those by Laur in Switzerland, Brdlík in Czechoslovakia, and by several Russian, German, Danish, and Norwegian investigators. These studies of a large group of peasant farms of all sizes over a number of years furnish full information concerning incomes and expenditures of all types.[39]

Another large and important group of farm budgets is that collected by the Russian *zemstvo* or self-governmental institutions. These consider the peasant family largely from the viewpoint of mass consumption, as contrasted with the farm-business analysis of the farm-management studies. The tables below give the principal results of the study by Rubin, the American farm-management studies, and the Russian studies of mass consumption. In addition, a typical budget of a Chinese peasant is presented. The Swedish study of 1920 is summarized in the readings.

In the United States there are two or three types of budgetary studies of farm families in addition to those given by the farm management group. Among the first of these is a group of studies made by Ellis L. Kirkpatrick and his associates. Kirkpatrick's studies are limited to the expenditure side of the budget, and, furthermore, they omit the farm and other expenditures that may be classified as investment (reinvestments in the farm). A typical table of Kirkpatrick's is given on page 393.[40]

[39] The United States Department of Agriculture has summarized the farm management studies in the United States in its Yearbook for 1925.

[40] Ellis L. Kirkpatrick, *The Standard of Life in a Typical Section of Diversified Farming,* Cornell University Agricultural Experiment Station Bulletin No. 423, 1923, p. 39; United States Department of Agriculture Bulletin No. 1214. The United States Department of Labor studies are to be found in the Seventh Annual Report, 1891, and in the *Monthly Labor Review,* August, 1919. Noble's study has since been published as the Cornell University Agricultural Experiment Station Bulletin No. 431. In the same table Kirkpatrick gives other data for the works of Eden, Engel, Le Play, and others. Kirkpatrick's study of New York farmers includes cash spent, plus a valuation of some things furnished by the farm, and some computations of depreciation, but it omits certain investment groups, such as farm expenditures, which add to inventories. Of a similar nature is the study by Wilson Gee and W. H. Stauffer, *Rural and Urban Living Standard in Virginia,* University of Virginia Institute for Research in the Social Sciences, Monograph No. 6, 1929.

Summaries of Representative Farm Business Studies in the United States *

State, County, and Locality	Principal Sources of Income	Year Covered by Survey	Number of Farmers Included	Size of Farm in Acres	Total Capital †	Percentage of Capital in Real Estate	Receipts, Including Addition to Inventory ‡	Value of Family Living from Farm	Gross Income §	Expense of Business Including Depreciation **	Net Income §§	Value Placed on Farmer's Labor	Value Placed on Unpaid Labor of Others of Family ††	Capital and Managerial Income ‡‡
Arizona: Graham, Maricopa, and Yuma	Cattle, alfalfa, dairy, hogs, wheat, poultry, and cotton	1914–1916	627	104	$21,740	84.6	$4,051	$328	$4,379	$1,504	$2,875	$694	$100	$2,081
Colorado: Lincoln and Washington	Wheat, cattle, hogs, dairy and poultry	1922	159	723	28,124	87.6	2,758	540	3,298	1,643	1,655	632	189	834
Delaware: New Castle–Middletown	Wheat, dairy, corn, sugar	1924	65	216	22,832	81.3	4,904	540	5,444	2,998	2,446	663	210	1,573
Florida: Levy–Williston	Cucumbers and hogs	1923	120	170	8,111	79.7	3,087	451	3,538	1,579	1,959	251	133	1,575
Georgia: Brooks	Cotton, hogs, watermelons, and corn	1914	106	145	8,992	75.2	2,195	584	2,779	1,435	1,344	405	101	838
Idaho and Washington: Latah and Whitman–Palouse	Wheat	1919	226	301	46,183	90.0	8,659	608	9,267	3,789	5,478	1,037	263	4,178
Indiana: Clinton	Hogs, oats, cattle, wheat, and corn	1918	100	127	31,135	89.0	4,578	495	5,073	1,480	3,593	527	120	2,946
Iowa: Bremer and Fayette	Dairy, hogs, poultry, and cattle	1923	239	150	28,684	87.0	3,348	556	3,904	1,335	2,569	857	220	1,492
Kansas: Sherman and Thomas	Wheat, cattle, hogs, and dairy	1922	82	1,069	46,424	89.7	4,279	667	4,946	2,576	2,370	709	221	1,440
Mississippi: Jones	Cotton, dairy, cattle, hogs, and poultry	1919	154	154	6,531	...	1,809	627	2,436	822	1,614	531	187	896
Montana: Custer and Dawson	Wheat, cattle and hogs	1922	66	448	10,776	78.0	1,688	353	2,041	862	1,490	664	66	760

New Hampshire: Hillsboro	Dairy, poultry, and apples	1918	136	129	7,180	71.1	2,576	533	3,109	1,691	1,418	751	116	551
New York: Livingston	Milk, beans, cattle, wheat, potatoes, and hay	1918	697	147	18,859	78.6	4,258	449	4,707	2,864	1,943	582	232	1,129
North Carolina: Catawba	Cotton, sweet potatoes, dairy, wheat, cattle, and corn	1918	304	112	8,860	83.3	1,726	573	2,299	560	1,739	417	181	1,141
Ohio: Washington and Palmer	Cattle, poultry, sheep, hogs, dairy, and work off the farm	1918	47	162	8,187	68.5	1,431	511	1,942	620	1,322	348	152	822
Oregon: Sherman	Wheat	1920	144	996	61,200	86.0	13,082	644	13,726	7,597	6,129	1,195	164	4,770
South Carolina: Greenville	Cotton	1924	43	119	17,350	82.7	5,369	405	5,774	2,709	3,065	264	205	2,596
South Dakota: Jones	Cattle, hogs, crops and dairy	1921	61	1,068	22,014	73.5	2,106	445	3,551	1,278	1,273	364	179	730
Vermont: Franklin	Dairy	1922	114	185	11,624	72.2	2,679	349	3,028	2,482	646	650	197	—201
Virginia: Charlotte	Bright tobacco	1923	33	124	7,818	84.2	1,311	419	1,730	766	964	419	232	313
Washington: Yakima	Potatoes, alfalfa, dairy, wheat, and cattle	1922	139	46	13,336	86.5	2,293	425	2,718	1,751	1,367	645	148	574

* Adapted from the Yearbook of the United States Department of Agriculture, 1925, pp. 1286–1311.

† The value of all real estate, machinery, live stock, and other property used to carry on the year's business. It includes the value of the farm dwelling but not of the household furnishings.

‡ Receipts. Proceeds from the sale of crops produced during the farm year. The increase from live stock is found by subtracting the sum of the amount paid for stock purchases and the inventory value at the beginning of the year from the sum of the receipts from live-stock products, sales of live stock, and the inventory value at the end of the year. Receipts do not include the family living from the farm.

§ Gross Income. Farm income plus the value of the family living from the farm.

** Expenses. Annual expenditures made in carrying on the farm business. They include depreciation on buildings and equipment but do not include the farmer's own labor and the unpaid labor performed by members of the farm family or any household and personal expenses.

§§ Net Income. The difference between the receipts and expenses including the family living from the farm.

†† Farmer and family labor. These are values imputed to the unpaid labor of the farmer and his family. These are the estimates by the persons making the study.

‡‡ Capital and managerial income. These amounts are secured by subtracting the value of the unpaid labor of the farmer and his family from the net income. The family received this much in money or produce besides pay for their labor.

Budgets of 251 Families of Danish Laborers in 1897 *

(Cash values given to goods produced at home)

	Copenhagen	Provincial Cities	Rural Districts
Number of families	27	23	201
Number of members	4.89	5.61	4.86
Number of adult units	3.10	3.33	2.93
Income per family in crowns	1,706.02	995.47	793.44
Income per member in crowns	348.88	177.44	163.25
Income per adult unit in crowns	550.33	298.94	270.80

	Copenhagen			Provincial Cities			Rural Districts		
	Expenses per Family in Crowns	Per Adult Unit		Expenses per Family in Crowns	Per Adult Unit		Expenses per Family in Crowns	Per Adult Unit	
		In Crowns	In Percentage of Total		In Crowns	In Percentage of Total		In Crowns	In Percentage of Total
Food									
Animal	419.74	135.40	24.76	243.22	73.04	24.71	207.56	70.84	26.77
Vegetable	367.75	86.37	15.79	222.48	66.81	22.61	194.79	66.38	25.08
Beer, wine, and tobacco	106.89	34.48	6.31	42.36	12.72	4.30	33.16	11.42	4.32
Total	749.38	256.25	46.86	508.06	152.57	51.62	435.51	148.64	56.17
Clothing									
Manufactured articles	141.58	45.67	8.35	89.71	26.94	9.12	79.84	27.25	10.30
Shoes	54.00	17.42	3.19	33.00	9.91	3.35	20.31	6.93	2.62
Total	195.58	63.09	11.54	122.71	36.85	12.47	100.15	34.18	12.92
Household rent or physical upkeep	228.41	73.68	13.48	127.11	38.17	12.91	56.73	19.36	7.32

Heat and light	67.21	21.68	3.97	53.44	16.05	5.43	42.84	14.62	5.52
Laundry, washing, and upkeep									
Laundry	25.33	8.17	1.50	13.55	4.07	1.38	7.30	2.49	0.94
Upkeep and purchase of furniture	56.29	18.16	3.32	18.02	5.41	1.82	12.92	4.41	1.67
Total	81.62	26.33	4.82	31.57	9.48	3.20	20.22	6.90	2.61
Health, education, and insurance									
Doctors and medicine	10.72	3.46	0.63	8.06	2.42	0.82	8.32	2.84	1.07
Contributions to health associations in case of sickness	38.87	12.54	2.29	14.85	4.46	1.51	10.49	3.58	1.35
To worker's unions and professional syndicates	25.70	8.29	1.52	3.16	0.95	0.32	3.34	1.14	0.44
To other associations	10.20	3.29	0.60	5.79	1.74	0.59			
Education of the children	10.45	3.37	0.62	4.43	1.33	0.45	.....	.....	.....
Books and papers	20.71	6.68	1.22	11.36	3.41	1.15	6.97	2.38	0.90
Total	116.65	37.63	6.88	47.65	14.31	4.84	29.12	9.94	3.76
Taxes	13.08	4.22	0.77	16.78	5.04	1.70	12.83	4.38	1.65
Recreation	82.18	26.51	4.85	23.11	6.94	2.35	0.18	0.06	0.02
All other expenses									
Payment of loans and interest	44.11	14.23	2.60	22.04	6.62	2.27	31.15	10.63	4.02
Diverse and unclassified	71.86	23.18	4.23	31.71	9.52	3.21	46.60	15.91	6.01
Total	115.97	37.41	6.83	53.75	16.14	5.48	77.75	26.54	10.03
Grand total	1,695.08	546.80	100.00	984.18	295.55	100.00	775.33	264.62	100.00

* Taken from Marcus Rubin, "Consommation de familles d'ouvriers danois," *Bulletin de l'Institut international de statistique*, Vol. XIII, 1903, Part III, p. 79.

PEASANT'S BUDGET ON A FARM SITUATED IN A VILLAGE OF 120 FAMILIES NEAR WUHU, ANHWEI, CHINA, MAY 1, 1921, TO APRIL 30, 1922 *

PRODUCE	CAPITAL			
	Beginning of Year	End of Year	Decrease	Average
Land (17 mows)	$1,600.00	$1,600.00		
Buildings	180.00	180.00		
Farm tools and equipment	70.00	66.00		
Seed, grain, etc.	4.00	4.00		
Live stock	40.18	41.80		
Total	$1,894.18	$1,891.80	2.38	$1,892.99

* J. Lossing Buck, *An Economic and Social Survey of 102 Farms near Wuhu, Anhwei, China,* University of Nanking, 1923. "There were six separate pieces of land averaging about three mow (a mow is a sixth of an acre) apiece and all were very near the farmer's residence. The family has a feud with another family over the selling of products. This family is cleaner than the average for the region. Implements and animals were loaned and borrowed for a period of ten days. The operator was born in the village he is now living in. His father was born in the same village and was a farm owner. The operator's wife and her father were also born in the same village. The operator belongs to the gentry, married at the age of 24, and had a debt of $400 when he began as an owner."

THE OPERATOR AND HIS HOUSEHOLD

AGE	MARITAL CONDITION	RELATION	OCCUPATION
60	Widower	Operator	Farming
24	Married	Son	Farming
26	Married	Son's wife	Farmer's wife
20	Single	Son	Farming

OPERATOR'S OCCUPATIONAL HISTORY

AGE	OCCUPATION	MOW			TOTAL OPERATED
		Bought	Inherited	Rented	
10–15	Farming as a boy	..	..	..	..
15–24	Hired man	..	..	..	..
24–32	Farming under father	..	..	..	..
33	Farming	..	5	17	22
50	Farming	10	..	15	30
55	Farming	2	..	..	17
60	Farming	..	..	..	17

PEASANT'S BUDGET ON A FARM NEAR WUHU, CHINA—*Continued*

PRODUCE	LIVE STOCK						
	Beginning of Year			End of Year			
	Number	Value Each	Total Value	Number	Value Each	Total Value	Died
Yellow cow	1	$40.00	$40.00	1	$40.00	$40.00	
Chickens	9	.02	.18	6	.30	1.80	1
Total value			$40.18			$41.80	

PRODUCE	FARM CROPS				
	Number of Mows	Yield per Mow	Total Yield in Piculs	Amount Sold	Value
Rice	15	4	60	20	$60.00
Rape seed (winter)	13	1	13	13	65.00
(Two mows were flooded)					$125.00

PRODUCE USED BY FAMILY FROM THE FARM

	Amount	Value
Eggs	150	$3.00
Straw (in piculs)	70	24.00
Chickens	2	.60
Rice (in piculs)	40	120.00
		$147.60

INCOME

Income from capital and operator's labor	$154.12
Interest at 8 per cent	151.44
	$2.68

FARM EXPENSES

Family (labor unpaid)	$50.00
Value of board to unpaid labor	50.00
Buildings, repairs	4.00
Farm tools, repaired	1.00
Feed for animals	2.00
Taxes	5.00
Miscellaneous	.10
	$116.10
Decrease of capital	2.38
Total expense	$118.48

RECEIPTS

Crops	$125.00
Use of produce by family	147.60
Total receipts	$272.60

Typical Family Budgets of Russian Peasants for the Prerevolutionary Period, 1880–1890 *

(Averages, in rubles, from many budgetary studies)

Number of Persons per Peasant Household	Income per Household				Expenses per Household									
					Food		Other Living Expenses		Farm Expenses, Including Upkeep, Improvements and Rent		Taxes		Total Expenses	
	Agriculture	Side Lines	Balance from Previous Year	Total Income	Rubles	Per Cent	Rubles	Per Cent	Rubles	Per Cent	Rubles	Per Cent	Rubles	Per Cent
a. 4.08	57.11	59.04	1.95	118.10	60.98	55.89	17.51	16.05	15.12	13.87	15.47	14.19	109.08	100
b. 4.94	127.69	49.22	1.21	178.12	80.98	46.47	17.19	9.87	58.32	33.46	17.77	10.20	174.26	100
c. 8.23	287.40	108.20	34.11	429.72	181.11	47.77	44.62	11.77	121.42	32.02	32.02	8.44	379.17	100
d. 13.00	496.12	146.67	110.00	753.19	283.65	44.86	76.77	12.14	222.39	35.17	49.55	7.83	632.36	100
e. 14.20	698.06	247.60	33.00	978.66	373.81	39.88	147.83	15.77	347.76	37.12	67.90	7.23	937.50	100
f. 16.00	698.39	975.20	93.20	1,766.79	447.83	28.10	82.76	5.19	976.84	61.29	86.34	5.42	1,593.77	100
8.27	292.74	164.67	34.03	491.44	180.75	40.80	47.30	10.68	180.60	40.77	34.35	7.75	443.00	100

* Taken from Nikolai Lenin, *Works* (Russ.), Vol. III, Moscow, 1924, pp. 109–111.

Average Expenses of Ten Siberian Peasant Households in 1928 *
(In rubles)

Economic Class	Average Expense per Household, 1927–1928	Agricultural Taxes	Other Taxes	Insurance	Debt to State Organization	State and County	Grain and Flour	Other Food	Cattle	Food for Cattle	Inventory	Wood and Timber	Clothing and Shoes	All Other Expenses
I. Poorest peasants														
Agricultural laborers †	136.7	1.5	0.4	1.5	1.6	1.6	16.2	14.8	16.5	2.9	2.6	4.2	38.3	34.6
Other laborers ‡	195.1	2.3	2.3	1.2	1.8	4.6	27.1	28.4	12.3	5.8	3.0	9.8	50.9	45.6
II. Poor peasants	143.8	5.3	1.1	2.9	1.7	3.3	11.5	19.8	12.0	4.2	4.0	5.8	35.6	36.6
III. Average well-to-do peasants	293.2	33.5	11.8	9.2	4.1	10.7	7.5	28.8	10.8	5.8	29.0	7.7	67.6	66.6
IV. Rich peasants	580.3	83.6	44.8	15.7	8.1	36.6	3.7	52.9	10.3	5.4	65.2	15.9	118.9	119.2

* V. Kavraiski and I. Nusinoff, *Classes and Class Relationships in Contemporary Soviet Villages* (Russ.), 1929, p. 169.
† Poor peasants without land who work as farm laborers.
‡ Poor peasants who work as laborers in industry rather than on farms.

BUDGETS OF PEASANTS IN CENTRAL RUSSIA, 1922–1923 *
(In relative units) †

	PEASANT A	PEASANT B	PEASANT C
INCOME BUDGET			
Agriculture			
Field products: corn, rye, potatoes, etc....	155	242	158
Hay	35	70	60
Dairy and cattle products.....	92	171	151
Collection of mushrooms, berries, etc....	6	32	6
Honey and bees.....	130	...	...
Nonagricultural by-industries			
Woodwork, building his own barn, etc...	150	429.25	177.50
Total	568	944.25	552.50
EXPENSE BUDGET			
For upkeep of the farm, inventory, seeds, new utensils, etc.....	122.00	298.00	138.50
Food, clothing, shoes, etc.....	278.00	446.50	312.25
Depreciation of buildings, inventory, etc...	37.50	95.00	38.75
Taxes (exempted for 5 years).....	.....	46.50	23.00
Religion, medicine and culture (exempted for 5 years)	.....	14.50	3.25
Total	437.50	900.50	515.75

* From M. J. Fenomenov, *Sovremennaia derevnia.* (*The Contemporary Village*), I, 175–188.

† 1 unit=1 pood of rye (1 pood=36 English pounds)=1 pood of barley=2 pood of oats=3 pood of potatoes=5 pood of hay, and so on.

Kirkpatrick's table, following, shows that the cultural expenditures of farmers approximate those of laborers and consequently on the whole are lower than the average of all city families.[41] Kirkpatrick's other studies may be found in his book, which is not quoted further since the data are available in other forms.

A second group of American studies was made in Minnesota under the leadership of Carle C. Zimmerman and John D. Black. These investigations have attempted to study the cash budget and the income derived from the land separately. Furthermore, they have attempted to include the "comprehensive" budget, in which incomes and expenditures of all types are considered. Some of the

[41] Kirkpatrick, *The Standard of Life in a Typical Section of Diversified Farming*, p. 39. See also Shiroshi Nasu's Japanese study in the readings.

COMPARISON OF PERCENTAGES OF TOTAL EXPENDITURES USED FOR DIFFERENT ITEMS BY NEW YORK FARMERS AND AMERICAN WAGE EARNERS

ITEM OF EXPENDITURE	UNITED STATES DEPARTMENT OF LABOR STUDY		NOBLE'S STUDY OF GROTON, NEW YORK LABORERS, 1919	KIRKPATRICK'S STUDY OF NEW YORK FARMERS, 1920–1921
	1890–1891	1918–1919		
Food	41.1	38.2	41.7	39.2
Rent	15.1	13.4	13.1	12.0
Clothing	15.3	16.6	11.3	13.8
Fuel and light	5.9	5.3	6.8	7.4
All other purposes	22.7	26.4	27.1	27.7

studies pay particular attention to cash incomes and expenditures, and others take into consideration farm products and their consumption. The group of Minnesota studies, unlike most of the other studies, point out especially clearly that Engel's laws of budgetary competition do not give the most accurate interpretation of the farm budget for the simple reason that the farmer is a capitalist and as such tends to reinvest his surplus funds in the business, like the capitalist of the urban upper classes. Since the farmer-peasant classes, on the whole, have an income not materially greater than that of the urban lower classes and since they attempt to spend it on the same principles of consumption as the urban upper classes, they naturally have a standard of living that is, from the standpoint of their immediate consumption of economic goods, not notably higher than that of the urban lower classes. In economic goods consumed for cultural purposes the rural class resembles the urban lower class; in distribution of its budget, that is, in proportions for current expenditures and investment, it resembles the urban upper class. This finding is in conflict with Engel's basic principles of budgetary competition both in the farmer-peasant class and in the urban upper class. The evidence afforded by the budgets of the Russian peasant families, as presented in the preceding tables and as shown by several Russian investigators, such as Pervoushin, Postnikov, Scherbina, and others, indicates that the same condition exists in Europe and Russia. There is strong evidence of the general validity of the principles stressed in the Minnesota studies. They represent a systematic formulation of principles of budgetary distribution that add much to those of Engel and Le Play.

The point of this analysis is that although the farmers have incomes not much larger than those of the lower urban groups, they tend to save and invest a large proportion in the same manner as the upper urban groups. As a result, their consumption of material goods is low, but they gain in greater safety for the future, in the accumulation of capital, in security from the poorhouse, and they contribute to the national wealth more than the lower urban classes generally. This study simply confirms the conclusions of Gregory King concerning the English farmers of 1688. Since these studies are available, they are omitted from further analysis here.[42]

The following conclusions are suggested: The farm budget is adjusted on a basis different from that of the city lower classes. On the whole, the rural groups are relatively similar to the lower urban groups in the current consumption of material goods. They resemble the upper classes, however, in saving for the future. These conclusions are especially sound since they are based on the comparisons of laboring, farming, salaried, and business classes in Minnesota, and on all the studies of the comprehensive budgets of operating farmers in Europe or Asia.

This "sense of the future," as indicated by savings and investments, is brought out by the proportions of individuals in the various groups supported by the state in old age, given later. It is a well-known fact that farm groups have a greater proportion of aged people than city populations. Yet fewer of them are given poor-law relief and state aid. This situation, of course, is due not only to family organization and integrity but also to savings. The fear of the poorhouse is real among rural groups. Since the details in proof of this attitude are numerous and will be given later, it is enough to mention it as evidence of the point. A number of other studies have been made in America and in Europe, but we can mention most of them only briefly in this chapter and in the bibliography.

[42] See Carle C. Zimmerman, in the University of Minnesota Agricultural Experiment Station Bulletin No. 255, 1929. Of a similar nature is the doctor's thesis of Charles E. Lively, which shows by careful analysis, using the partial correlation and intercorrelation methods, that many of these claims concerning the rural budget are true. See also W. A. Anderson, in the North Carolina Agricultural Experiment Station Technical Bulletin No. 37, 1930. For a complete bibliography on rural standards of living in the United States see L. O. Bercaw, *Rural Standards of Living*, United States Department of Agriculture Publication No. 116, July, 1931.

5. *Food budgets and food consumption.*—Studies of the food budgets and food consumption of the rural classes are rather numerous. The tables show that the food consumption in the farmer-peasant class is greater than in the urban classes, especially the lower urban class. Incidentally, the tables show that the rural class is close to nature: it consumes large amounts of natural and unrefined foods. In the tables below we give the chief conclusions based on the studies by Ducpétiaux in 1853 as they are summarized by Ernst Engel, the data based on the Danish study conducted by Marcus Rubin in 1897, and some typical results of the Russian studies. Data on the United States are omitted.[43]

FOOD CONSUMPTION OF RUSSIAN PEASANTS *

VARIOUS PROVINCES	CALORIES	PERIOD
Cherepovets	4,284	Prerevolutionary
Astrakhan	4,516	
Verey	3,266	
Voronezh	3,025	
Moscow	3,448	
Tambov	3,288	
Samara	4,231	
Astrakhan	3,816	
All classes, 13 provinces of European Russia	3,154	Revolutionary
Average per individual man in Russia	2,308	Prerevolutionary

* Taken from A. M. Bolshakoff, *Soviet Village* (*1917–1924*), Leningrad, 1924, p. 160. See also Klepikov, *Consumption of the Russian Peasants,* Moscow, 1920; Marres, *Russkaia Mysl* (*Food of the People's Masses*), 1893; Slovtzoff, *Food Budgets,* 1919; Scherbina, *Peasant Budgets,* 1900. In these works, all of which are in Russian, may be found references to numerous other Russian studies.

[43] For other comparisons of rural and urban consumption of food see the University of Minnesota Agricultural Experiment Station Bulletins Nos. 162, 234, 340; Carle C. Zimmerman, unpublished master's thesis, North Carolina State College; Raymond Pearl, *Studies in Human Biology,* Baltimore, 1924, p. 419; Ernst Engel, "Die Lebenskosten belgischen Arbeiter-Familien früher und jetz," *Bulletin de l'Institut international de statistique,* Vol. IX, 1895, 47; Marcus Rubin, "Consommation de familles d'ouvriers danois," *ibid.,* Vol. XIII, 1903; *Levnadskostnaderna på landsbygden i Sverige, vid år, 1920*; John O. Rankin, in the University of Nebraska Agricultural Experiment Station Bulletin No. 219; Charles E. Lively, in the mimeographed study by the Ohio Agricultural Experiment Station, 1924; A. Slosse and E. Waxweiler, *Enquête sur l'alimentation de 1065 ouvriers belges,* pp. 171 ff.; the United States Department of Agriculture Yearbooks, 1920, 1923, and 1924; and Carl C. Taylor, *Rural Sociology: A Study of Rural Problems,* New York, 1926, p. 338. Benjamin S. Rowntree's study of Belgian laborers and peasants shows greater food consumption among peasants than among urban laborers. The agricultural study on Gaggar Bhana in India, a portion of which is given in the readings, reveals greater food consumption among the agricultural castes of Gaggar Bhana.

QUANTITIES OF FOODS AND FUELS CONSUMED ANNUALLY BY TYPICAL RURAL AND URBAN HOUSEHOLDS IN SWEDEN, 1913–1923 *

(3.3 Adult-Equivalents Swedish Scale)

ITEM	UNIT	CITY LABORERS		AGRICULTURAL LABORERS, SMALL TENANTS, AND OWNERS, 1920	MIDDLE CLASS IN CITIES, 1923
		1913–1914	1922–1923		
Meat †	Kg.	85.4	90.1	104.5	107.9
Cured meat	Kg.	14.7	13.2	20.3	12.2
Salted herring	Kg.	14.9	17.5	32.7	21.4
Whole milk	Lit.	647.5	838.9	1,009.8	956.0
Skim milk	Lit.	225.5	59.7	504.6	15.2
Butter	Kg.	31.6	36.6	29.7	46.2
Margarine	Kg.	20.4	21.1	7.8	22.4
Cheese	Kg.	13.7	16.5	5.8	17.8
Eggs	No.	443.0	624.0	305.0	871.0
All kinds of bread	Kg.	193.3	235.0	599.0	188.5
Gruels from cereal (*Frua*)	Kg.	31.9	27.0	27.1	35.6
Peas	Kg.	6.4	5.0	19.3	7.3
Brown beans	Kg.	2.9	2.0	2.6	2.0
Potatoes	Kg.	312.0	386.7	695.1	369.9
Sugar	Kg.	84.9	100.0	93.2	115.8
Coffee	Kg.	17.2	19.8	20.7	18.5
Alcoholic drinks	Lit.	7.3	11.6	7.9	17.5
Coal and coke	Hl.	5.7	5.3	0.5	11.2
Petrol	Lit.	80.8	19.1	26.9	14.2
Number of households		1,335	962	372	208
Number per household ‡		4.44	4.42	5.04	3.98
Adult units per household §		3.32	3.33	3.73	2.99
Net incomes per household **	Kg.	1,854.00	3,981.00	3,418.00	8,433.00

* *Statistisk Årsbok för Sverige*, 1928, Table 191, pp. 231–232.

† The cured meat is also included in the above total meat column. The subtraction of the lower column gives the kilograms of fresh meat consumed.

‡ "Persons" per household in the American sense.

§ These were actual units found. The table of food and fuel consumption is reduced to 3.3 adult equivalents.

** Expenses of business, as in agriculture, are subtracted. The 1914 laborers were buying on a much lower price level than in 1922–23.

FOOD VALUES IN GRAMS RECEIVED DAILY BY AN AVERAGE ADULT MALE LABORER 25 YEARS OF AGE OR OVER *
(According to Ducpétiaux's 1853 study)

TYPE OF LABORING FAMILIES	FOOD VALUE (*Nahrungs Menge*)	IRON (*Eiweiss*)	FAT	CARBOHYDRATES	SALT
Urban					
Needy	1,139.34	46.16	16.84	394.32	11.10
Poor	1,176.95	60.25	27.14	435.37	11.67
Comfortable	1,321.18	69.92	39.01	462.16	13.26
All urban	1,212.49	58.87	27.48	429.48	12.00
Rural					
Needy	1,552.90	57.53	17.82	528.87	14.49
Poor	1,642.27	69.21	30.15	565.73	15.94
Comfortable	1,786.30	75.42	39.59	576.38	17.53
All rural	1,660.50	67.51	28.40	557.01	16.49

* Taken from Engel, *op. cit.*, p. 52. See also p. 23.

The three classes are based upon Le Play's grouping of laboring families into "needy" (who receive charity), "poor" (who are self-supporting but who save nothing), and "comfortable" (those who save something).

These studies show a generally higher consumption of food in the rural districts. The study by Slosse and Waxweiler for 1910 comes to the same conclusion.[44] When laborers are grouped in standardized income units such as those with less than 1.00 franc per day per adult unit, from 1.00 to 1.49 francs per day per adult unit, and so forth, the relationship still continues, whether the amount is measured by the grams of albumen in the food or the total number of calories ingested. A comparison of mechanics in the same wage group indicates that, when purchasing power and occupation are held constant, there is a higher percentage of mechanics with 85 grams of albumen ingested per day and 3,500 calories per day in rural districts. These data and others point rather definitely to greater food consumption in rural districts. However, in all cases the food is coarser, less refined, and more directly derived from nature. Furthermore, the comparisons did not include a fair sample of the urban upper classes.

[44] A. Slosse and E. Waxweiler, *Enquête sur l'alimentation de 1065 ouvriers belges.*

Quantities of Food Consumed by an Adult Male in Rural and Urban Districts of Denmark, 1897 *

Locality	No. of Adult Males per Family	Income per Male in Danish Crowns	Percentage Consumed													
			Beef	Pork	Eggs	Butter	Lard	Margarine	Cheese	Black Bread	Peas	Potatoes	Sugar	Coffee	Light Beer (*Bottles*)	Strong Beer (*Halves*)
Copenhagen ...	3.06	556.36	82.9	36.2	161.7	30.6	9.5	5.6	14.4	242.1	4.8	23.9	65.6	7.5	163.5	94.9
Provincial cities	3.33	298.94	53.6	23.4	76.4	9.9	9.4	21.3	10.9	303.9	3.6	22.8	56.7	7.3	88.4	11.0
Islands	2.94	267.92	30.2	50.0	65.1	11.2	11.9	18.3	15.1	276.7	3.0	45.0	49.3	6.5	75.1	18.2
Jutland	2.91	274.64	29.8	36.1	67.0	11.4	7.0	22.5	11.2	219.9	2.4	48.9	58.4	6.5	33.6	6.1

* Taken from Marcus Rubin's study, "Consommation de familles d'ouvriers danois," *Bulletin de l'Institut international de statistique*, Vol. XIII, 1903, pp. 49 and 73

The fact that the rural income is derived more from nature and less from the world of business is obvious and hardly needs verification. The Swedish study in the readings shows that 39 per cent of the income of the wage earners and tenants was in kind rather than in money. Data collected from about 10,000 farm families in the United States between 1913 and 1922 by H. W. Hawthorne show that 38 per cent of the farmer's needs were supplied by the farm, and 66 per cent of the value of his food, estimated house rent, and fuel. The percentage increases rapidly with the size of farm and the size of the family. There were no differences between the tenants and the owners in this respect, except in "house rent"; in other words, tenants raise as much food for themselves as owners, but owners have better houses.[45] The conclusions are similar in Russian, Swiss, German, and other studies.

These data also reveal that the rural families improve their standards of living not only by increasing their money income but also by using their spare time and the environment of farm life for producing more food and other economic or cultural goods. This is shown in the table, which presents the relative rates

RELATION OF SIZE OF INCOME TO CONSUMPTION OF PURCHASED AND HOME-PRODUCED FOODS IN THE UNITED STATES *

INCOME GROUPS†	PURCHASED FOOD	HOME-PRODUCED FOOD
$1,000 or less	100	100
2,001 to 2,500	103	124
3,001 to 3,500	118	145
4,001 to 4,500	121	162
4,501 or more	137	151

* Per adult-equivalent. Home-produced food is valued at the farm prices reported by the United States Bureau of Agricultural Economics.

† These are gross cash receipts.

[45] See the United States Department of Agriculture Bulletin No. 1338 for a comprehensive study and bibliography. See also John O. Rankin, in the University of Nebraska Agricultural Experiment Station Bulletin No. 219; Ellis L. Kirkpatrick and J. T. Sanders, *The Relation between the Ability to Pay and the Standard of Living among Farmers,* United States Department of Agriculture Bulletin No. 1382, 1926; Ellis L. Kirkpatrick, *The Farmer's Standard of Living,* United States Department of Agriculture Bulletin No. 1466, 1926; J. F. Thaden, in the Iowa Agricultural Experiment Station Bulletin No. 238; and R. C. Hill, E. M. Morgan, M. V. Campbell, and O. R. Johnson in the Missouri Agricultural Experiment Station Bulletin No. 148, July, 1930.

of increase of purchased and home-produced foods in Minnesota groups with increase in cash receipts.[46]

The data presented here corroborate the generalizations as to the farmer-peasant standard of living and outline its characteristics and peculiarities. It is evident that from this standpoint the agricultural class again occupies a peculiar position that is both similar to and different from the labor and the upper urban classes.[47]

6. *The nature of the income sources.*—Economists generally divide the nature and sources of income into wages, salaries, interest, rents, and profits. Wages and salaries are the sources of income of the laboring classes and employes; interest and profits, of capitalists and entrepreneurs; and rents, of the landlord class. Whatever the classification of income may be, it is clear that the farmer-peasant class, with the exception of hired farm labor, has a peculiar position, different from that of other social classes. The income of the rural class represents a combination of almost all kinds of income: in part, it is a wage for labor; in part, it is profit from enterprises and interest on the money invested; and finally, it is rent for land and immovable property. In brief, rural income is a composite, inasmuch as it is made up of almost all categories of income.

From this standpoint the farmer-peasant class cannot be wholly identified with any one of the large urban social classes. Its economic interests are neither entirely different from those of any of the other classes, but neither are they exactly the same as those of any other class. In the field of political activities this may lead either to the temporary consolidation of this class with any one of the others or to antagonism to all the urban groups, according to particular circumstances. History bears out this assertion.

The ownership by American farmers of nonagricultural property from which they received incomes during the year 1920 is estimated by Lewis C. Gray[48] (in millions of dollars) as follows: cash and bank deposits, $3,635; stocks in urban enterprises, $1,015; bonds in urban enterprises, $694; urban real estate, $731; bills re-

[46] University of Minnesota Agricultural Experiment Station Bulletin No. 246.

[47] For further references to budgetary studies see the bibliography at the end of this discussion.

[48] Lewis C. Gray, "Accumulation of Wealth by Farmers," *American Economic Review,* Supplement, XIII, 175 (March, 1923).

ceivable, $1,651; miscellaneous property, $134; total nonagricultural property, $7,860.

The two tables below show, respectively, from what sources Swiss peasants on various sized farms derived their income during the first quarter of the century [49] and the distribution, computed according to the accounting system of farm management used by the Swiss peasant secretariat, of the expenditures on various types of farms. These tables illustrate further the general types

SOURCES OF INCOME IN RELATION TO THE SIZE OF THE FARMS IN SWITZERLAND, 1901–1926

SOURCE OF INCOME	PERCENTAGE OF RECEIPTS ACCORDING TO SIZE OF FARMS (IN HECTARES)				
	Less Than 5	5–10	10–15	15–30	30 and Over
Animals	80.38	78.93	79.41	82.40	80.60
Crops and pasture	6.09	7.31	7.14	7.89	8.82
Fruits and berries	5.85	7.13	6.61	4.40	3.90
Grape vines	4.46	3.24	2.54	1.17	1.49
Forest and wood products	1.42	2.33	3.28	3.49	4.47
Diverse sources	1.80	1.06	1.02	0.65	0.72
Total	100.00	100.00	100.00	100.00	100.00

PERCENTAGE DISTRIBUTION OF FARM EXPENSES ON SWISS PEASANT HOLDINGS OF VARIOUS SIZES
(Average for 1905–1924)

SOURCE OF EXPENDITURE	SIZE OF FARM (IN HECTARES)					
	3–5	5–10	10–15	15–30	30–70	All (14.28)
Wages and salaries of employes	9.08	12.80	17.27	27.53	34.92	21.50
Theoretical wages of members of families	66.30	51.21	41.02	28.30	21.05	37.93
Interest on debts	17.40	16.75	17.39	15.99	21.30	15.45
Interest on capital of owner	4.79	16.80	21.73	25.59	20.44	20.62
Taxes to state	2.43	2.44	2.59	2.59	2.29	2.50

[49] Taken from Ernst F. Laur, *Recherches relative à la rentabilité de l'agriculture*, Report of the Swiss Peasant Secretariat, Part II, p. 365. Hereafter this report is referred to as *La rentabilité de l'agriculture*.

of incomes received by farmers. In addition, they reveal that there are the same general sources of income in nearly all agrarian classes from the small holdings to the large domains.[50]

A somewhat similar study of Swiss farms between the years 1901 and 1926 indicates 428 francs as the average value of all labor used on these farms—275 francs representing the unpaid labor of members of the family, and 153 representing hired labor.[51] Edgar Thomas in a study of 262 small holdings in Wales reports that they employed 404 members of the family and 85 others.[52] Somewhat similar data exist for Denmark. A study of the costs of production (*frais d'exploitation*) per hectare for the farms of various sizes in Denmark during 1923 and 1924 reveals the fact that all classes of agriculturists are laborers, purchasers of production goods (merchandise), and controllers of other producing workers.[53]

Cost of Agricultural Operation per Hectare in Denmark, 1923–1924
(In Danish Crowns)

Size of Farm (in hectares)	Hired Labor	Family Labor (Estimated)	Merchandise Purchased	Other Production Costs	Total
Less than 10	91	406	611	158	1,266
10–20	153	172	406	152	883
20–30	177	124	356	143	801
30–50	173	99	306	130	708
50–100	167	73	284	123	647
100 and over	163	44	211	123	541

All types of agriculture involved family labor, hired labor, the purchase of capital goods, and other costs of operation. This distribution of actual costs of operation plus the estimated value of family labor supplies an index of the general character of the agricultural income and the diverse sources of origin. The Finnish study of 426 farms lists the following actual or estimated

[50] *Statistisches Jahrbuch der Schweiz,* 1925, p. 104; and *La rentabilité de l'agriculture,* Part I, pp. 119 ff. Similar data for Finland are to be found in the *Annuaire statistique de Finlande,* 1928. The tables are based upon cost studies of 426 farmers carried on by Finnish economists between July, 1926, and June, 1927.

[51] *La rentabilité de l'agriculture,* Part I, pp. 133–134.

[52] Edgar Thomas, *The Economics of Small Holdings: A Study Based on a Survey of Small Scale Farming in Carmarthenshire,* Cambridge, 1927, p. 51.

[53] *Statistisk Aarbog* (for Denmark), 1926, p. 55.

costs of production: cattle, horses, pasture and forage, feed, seed, buildings, loss in inventories, family garden, wages (actual or estimated), insurance premiums, and all others. This list is similar to the accounts of an urban business.[54]

7. *General summary of the economic status.*—All of the following aspects characterize the economic status of a group: (1) its proprietorial or nonproprietorial character as to means and instruments of production; (2) the amount of wealth and income; (3) the standard of living; and (4) the sources of income. These data unanimously agree that the rural class occupies a position dissimilar to every urban class in some respect. In some characteristics it resembles the urban labor class; in others, it is similar to the urban proprietorial and upper classes; and in a few respects it is different from all of them. In view of this fact, the economic interests of the farmer-peasant class cannot be wholly identified with those of any of the urban classes. Since the economic status and interests of a class determine its policy and its social cohesion with and antagonism towards other classes, the rural class cannot be expected to unite consistently either with urban labor or with the proprietorial class. This situation enables the rural class to join any group against another or to oppose all urban classes. A similar conclusion is drawn from the analysis of the occupational status of farmer-peasants. The identical results in the two cases increase the validity of the conclusions.

IV. SOCIO-POLITICAL STATUS

In any characterization of the socio-political status of a class these features are especially important: first, the degree of socio-political stratification within a particular class; secondly, the total number of rights and disfranchisements of a particular social class as compared with other classes; and thirdly, the principal characteristics, both juridical and factual, peculiar to the status of that class. Let us glance at the rural class from all these standpoints.

1. *Socio-political stratification in the farmer-peasant class.*—In the preceding discussion it was indicated that the rural population is less differentiated in economic status and in occupation and less stratified than the urban population. This seems to be true also in regard to its socio-political stratification. When we

[54] See the *Annuaire statistique de Finlande,* p. 90. For further data see any study of urban versus rural incomes, especially Marcus Rubin's study for Denmark, cited.

exclude wealthy landowners from the rural class, the mass of the agricultural population as a rule has approximately the same rights and duties. In regard to civil, constitutional, criminal, and administrative rights and duties there is not much difference between the farm owner and the farm tenant and laborer. The differences are concerned chiefly with the rights and duties connected with residence (laborers who reside in a given locality only a short time are often prevented from voting) and ownership (in many countries one is required to own property in a given locality in order to participate actively in elections and in local government). On the other hand, the conditions of residence and ownership impose on the permanent residents and landowners additional duties and taxes from which the farm laborers and shifting population are free. These are the major differences. In other matters—for instance, in almost all processes of civil, criminal and constitutional law—there are no tangible differences between the upper and the lower strata of the agricultural population. Even various local governmental positions, which are dependent upon the rural population, or elective, give very moderate rights to their holders. For this reason, the status of an official of the rural class, such as sheriff, coroner, member of local peasant court, head of such local peasant self-governmental institutions as the Russian *volostnoi starshina,* village constable, village clerk, and so on, is not elevated much above the socio-political status of the agricultural population at large. Rural official distinction does not occasion the great social breach that separates the urban population at large from the upper class of officials in the city, for example, governors, kings, presidents, mayors, judges of supreme courts, ministers, or secretaries of departments; popes, metropolitans, and bishops; and other supreme authorities. When at times a high official visits or resides in a rural community, he generally comes from the city and is appointed by the central government, but he does not belong to the rural population. Not only in the past, but even at the present time, the social pyramid in the city is much higher than the rural one, because as a rule the rural population has always been less stratified and has had a more equal socio-political status than the urban. Therefore, the contrasts between the upper and the lower classes within the rural population must be less conspicu-

ous than within the urban. For this reason, the class struggle between various strata of the farmer-peasant class (exclusive of the stratum of big landowners) so far as it has been due to differences in socio-political status has been more moderate than the struggle between various strata of the city population.

2. *A comparison of the socio-political status of the rural and urban classes.*—If the stratum of great landowners in the rural class is excluded from consideration—a stratum that in origin, residence, and other essential characteristics has always been urban—then the whole socio-political status of the farmer-peasant class would be far lower than that of the whole urban population and especially than that of the upper urban classes. The total number of rights and privileges of the rural class has been, and still is, below that of the urban population. The total number of various disfranchisements has always been greater than that of the whole city population. Privileges and rights in regard to suffrage and voting in this or that form have been extended to the rural class later than to other classes and have had more limitations than those of most of the city population.[55] In various forms this persists to the present time. This discrimination prevails in regard to a number of civil, criminal, and administrative rights of the rural classes. For example, in Russia all urban classes had the right of private ownership of land after 1861; most of the peasant class did not have this right, but lived until 1906 under the régime of community landownership (*obschina*).[56] Similarly, the other classes were exempt from punishment by whipping long before 1905, when the peasant class became exempt. Although there were no special courts for the other classes, a special court existed for the peasant class up to the eve of the last revolution.

Similar limitations and disfranchisements existed for the peasant classes in many other countries. Even in countries where juridical discriminations now no longer exist, the actual socio-political status of the rural class remains, nevertheless, somewhat below that of the urban class. Indeed, taxes and military and other duties were loaded upon the rural class, in many cases even more than upon the urban population. Such privileges as a

[55] Even now in many countries large portions of the peasant population do not have many of these rights, and are subjected to restrictions of various types. A typical example may be found in Soviet Russia, where the vote of an urban laborer counts several times more than the vote of a peasant.

[56] See Basil Maklakov's paper in the readings in chap. ix of this work.

share of the national income, rights or possibilities of obtaining various social services (hospitals, schools, churches, theaters, telephones, roads, and so on), or various protective laws that would defend their interests as producers and as an economic class, have always been more limited in the rural class than in the bulk of the urban population. There are reasons to believe that the farmer-peasant class has always been robbed or exploited (consciously or unconsciously) in all these privileges by the city populations from the time of the emergence and growth of the cities.

This exploitation occurs too in the field of representation in the government and in the political influence of this class in all democratic countries. As a rule the rural class has been represented in parliaments, governments, congresses, or the supreme and governing bodies less than its proportion in the total population warranted. Its political interests were defended as a rule most inadequately, and very often they were sacrificed for the benefit of various urban groups and classes, including the urban labor class. Only very rarely and for short periods of time has the rural class succeeded in having a share in political influence and political status approaching that of the urban class. They are more than counterbalanced by the times in which the exploitation of the rural class by the city was exceedingly drastic, and the cities openly and frankly played the rôle of a parasite living almost entirely upon the rural population. An illustration occurred in the cities of Soviet Russia in recent years when agricultural products were seized with no recompense but bullets, punishment, execution, and imprisonment for farmers and peasants who tried to oppose the seizure.

Since such inequalities are always resented by any group, the privileged position of the cities naturally has become a source of unrest among the rural class. Sometimes this resentment has been shown mildly by complaints, sometimes by active revolts against cities in general. The socio-economic status of the rural class is most comparable in position to that of the lower urban classes, particularly the urban labor classes. Therefore, it is natural that this similarity has frequently brought about a solid joint policy of farmers and urban laborers directed against the privileged urban classes and the class of powerful landlords. If there had been no important differences and conflicts of interests

between the lower urban and the rural classes, their policies would have consistently opposed the common foes and enemies. In view, however, of many serious differences in occupational and economic status between the urban labor and the rural class, and in view of many conflicts between these classes, even in the field of politics, it is not surprising that similarities and common interests are often obscured.

3. *The peculiarities of the socio-political status of the farmer-peasant class.*—These peculiarities are many, and vary according to the country and the historical period studied. The characterization of these peculiarities is not important enough for discussion in a sociological work. But among them one marked characteristic is always present—an inadequate political organization of the rural class that renders it incapable of defending its interests and rights successfully or of putting itself on an equal level with the urban population.

Despite the fact of their enormous numerical superiority, especially in the past and in the predominantly agricultural countries of the present era, the rural part of the nation is generally ruled by the urban portion, whose population may constitute only a small minority. This situation, of course, has been due not so much to any particular superiority of the urban or inferiority of the rural population as to a series of factors inherent in urbanism and in ruralism. Chief among these have been the wide dispersion of the rural population over the territory, weak contact with other rural communities, low density of population, and a lack of concentration within the rural population of wealth, weapons, and other means of influencing opposing groups. These factors rendered impossible an efficient, centralized, and rapid organization of the cultivators in various defensive military, political, and influential units or associations. As a result, numerically weaker urban communities dominated, because of the concentration of the population in a relatively small territory, the possibility of efficient and centralized military and political machinery, and the concentration of wealth, press, preachers, teachers, military leaders, and other forces necessary for efficient organization. Urban groups exerted a political influence quite disproportionate to their numerical strength. This control has continued to the present time, in spite of several attempts to eliminate it on the

part of the leaders of the agrarian class and in spite of radios, telephones, new means of transportation, and other recent devices, which to some extent eliminate the sources of political weakness.

4. *Verification of the previous generalizations concerning socio-political status.*—The characterization of this status is in general well supported by historical and contemporary data. The inequality of the rural population, its disadvantageous position as compared with the urban group, and the antagonism between city and country people have been conspicuous throughout history from the moment of the appearance of cities up to the present day.

The existence of the city, whether in the ancient East, Greece, Rome, or in medieval Europe, presupposes the conscious or unconscious acquisition of advantages by the city at the expense of the country. In this sense exploitation existed, as did inequality between the socio-political status of the rural population and the status of the urban population. The first cities were predominantly "consumption cities" (so termed by Werner Sombart), which did not subsist on urban products, of which there were none, but procured subsistence from the country by such legal methods as taxes, rent, appropriation, and so on, without giving material or economic equivalent to the country. The first urbanities were predominantly "consumers," such as landlords, kings, princes, priests, military men, and their servants, who procured their subsistence by coercion or milder methods from the agricultural population and gave little or no economic equivalent.[57] Therefore "urbanocracy," or the socio-political domination of the city over the country, and the various ways of expanding and maintaining the economic and political domination of the city and its exploitation of the country appeared with urbanization.

Shall we wonder, therefore, that almost simultaneously with the appearance of the cities there sprang up complaints against the urbanites on the part of the rustics and a mutual antagonism between the two classes. Hesiod's *Works and Days* in ancient Greece (about the eighth century B. C.) is an example of such a complaint.[58] The disturbances of that period, in part at least,

[57] See Werner Sombart, *Der moderne Kapitalismus,* Vol. I, Part I, pp. 142 ff., 180 ff. Significant quotations from this work of Sombart are given in the readings in chapter iii. See also Henri Sée, *Les origines du capitalisme moderne* (*esquisse historique*), Paris, 1926, pp. 34 ff.

[58] See William R. Halliday, *The Growth of the City State,* Boston, 1923, pp. 85 ff.

were struggles between the rural and urban people, especially between the rural classes and the noble landlords who held enormous tracts of land. The old Egyptian *Complaint of the Peasant* also reveals some traces of this antagonism.[59] In the history of Rome and Greece this antagonism and the domination of city people over the rustics is always evident in varying degrees.

Although "the economic prosperity of the Roman Empire rested" on the tillers of soil, their "toil and travail never brought them any share either in the civilized life of the cities or in the management of local affairs."[60]

In the period of the Roman Empire as well as earlier in Syria, Egypt, and other Roman provinces "the rustic peasant population is constantly represented as a poor and oppressed class, ground down by rich lords who were the landowners of the city. At the first opportunity the peasants were ready to show their hatred of their oppressors."[61] The peasants' petition, made by a certain Aurelius Eclectus, depicts a situation that was probably more or less common throughout most of Roman history:

We are atrociously oppressed and squeezed by those whose duty is to protect the people. These men—officers, soldiers, city notables, magistrates, and your [Emperor Philip's] subordinate agents . . . come to our village and take us away from our work and requisition our plow-oxen, exacting from us what is not due to them. . . . The sharp antagonism between the peasants and the landowners of the cities may be found also in Egypt.[62]

In later periods oppression of the peasants became excessive, and accordingly their hatred of the city became so intense that they

[59] See the story in Adolph Erman, *The Literature of the Ancient Egyptians* . . . , London, 1927, pp. 116–131.

[60] Mikhail I. Rostovtzeff, *The Social and Economic History of the Roman Empire*, Oxford, 1926, p. 451. Perhaps only in the initial periods of Roman history, when the urban aggregates were weak, such a domination by the city did not exist. The statement of Tenney Frank that "the agricultural class was very powerful during most periods of the Republic" and that "the farmers and landowners were probably in control of all the rural tribes and their interests often coincided with those of senators who usually owned large tracts of land" was probably more true of the senators and landowners who very early became urban than of the cultivators and farmers in a narrow sense of the word. This is supported by the statement of Dr. Frank that "it is surprising that we never hear of laws to protect Roman farm-produce," and that "it was difficult to secure common action on the part of farmers [because they] were so separated geographically that their interests failed to coincide," and that they were in "miserable economic conditions." See Tenney Frank, *An Economic History of Rome*, Baltimore, 1927, pp. 42, 122–126.

[61] Rostovtzeff, *op. cit.*, p. 245.

[62] *Ibid.*, pp. 426, 447.

were glad of any opportunity to destroy the cities and to kill and torture the inhabitants. This, according to such a competent historian as Rostovtzeff, was one of the most important factors in Roman decadence.[63]

The condition of the peasant was similar in European history from the origin of urbanization in Europe and the appearance of cities. From the beginning the city community "worked solely for the profit of its members, without any regard for the rights of the neighboring and hostile communities. . . . It subjected the peasants of the surrounding district to itself, prevented a development of their commerce," and in hundreds of ways dominated, oppressed, and exploited them.[64]

With the development of the cities and the growth of the nonagricultural classes, more and more of the land (its legal title but not its possession) came into the hands of nonagricultural classes — governmental groups, the church, city landowners, and so on — who received a portion of its produce but who as a rule resided in the cities. The title to the land and the whole produce gradually slipped from the hands of the peasantry. The peasants were drawn into serfdom, bondage, and half-free villenage; directly and indirectly, they were preyed upon by the cities and the nonagricultural classes.[65]

Is this true at the present time in democratic countries, especially where the farmer-peasants are declared juridically equal to other classes and where they are extolled—at least in electoral speeches? Has the rural class a share of political influence and power proportionate to its numbers in the total population? Are the rights and interests of the agriculturists as well protected as those of city people?

An adequate answer to these questions is exceedingly difficult.

[63] *Ibid.*, pp. 237, 245, 253, 337–423, 370, 453, 470, 628, and *passim.*

[64] Prosper Boissonnade, *Life and Work in Medieval Europe,* New York, 1927, pp. 202 ff.

[65] Karl Bücher, *Industrial Evolution,* trans. from the 3d German ed. by S. Morley Wickett, New York, 1901, pp. 133–134; Boissonnade, *op. cit.,* pp. 101, 316–331; Jean Loutchisky, *L'état des classes agricoles en France à la veille de la révolution,* Paris, 1911, pp. 11–13. See also Henri Sée, *La France économique et sociale au XVIII^e siècle,* Paris, 1925. Further essentials of the situation through the Middle Ages and up to the beginning of the nineteenth century are given in the works cited above of Sombart, Boissonnade, Vinogradoff, and Sée, and in numerous works indicated in these books. See also the readings, Basil Maklakov's paper, "The Peasant Question and the Russian Revolution," in chap. ix, and Walter Schiff's paper in the reading in chap. vii of this work.

Nevertheless, some significant data are given. One criterion of political power and influence and political protection of the interests of any particular social class is the size of its representation in political institutions. This criterion reveals unmistakably that even now, when the political representation of the agricultural group is growing, the rural class has a representation in parliaments, congresses, and governments far below its proportion in the total occupational population or in the total population generally. A few representative data indicate this clearly.

In Soviet Russia, where the peasants compose from 83 to 89 per cent of the total or the occupational population, they compose only from 26.8 to 28.0 per cent of the representatives in All-Russian Congresses of Soviets, 25 per cent of the members of the Central Executive Committee of the Soviet Union (the highest political authority juridically), and only 5.8 per cent of the personnel of other important political institutions.[66] Thus, the peasant class is represented by less than one-third the number that it would have if representation were proportionate to its numbers in the total occupational population or even in the population as a whole.

In 1906 the agricultural population in France composed about 42 per cent of the whole occupational population. In the years from 1889 to 1892 the percentage was about 50. And yet, in the French Chamber of Deputies in the fifth session of the legislature, held from 1889 to 1892, only 10, or 1.8 per cent, of 578 deputies were agriculturists. In the tenth legislature (1910–1914), out of 558 representatives only 32 or 5.7 per cent were agriculturists.[67] In the legislature elected in 1928, out of 611 deputies only 40 or 6.6 per cent were agriculturists.[68]

In England in the Parliament at the end of the nineteenth century out of 551 members in the House of Commons only 50 were agriculturists. This percentage was somewhat below that of the

[66] *Ten Years of Soviet Power in Figures,* pp. 7, 74. Actually, the condition was still worse; those who know the situation realize that during those years in Soviet Russia there has been no real election and "peasant representation" has been nothing but an appointment by the Communist party of people who had many years ago ceased to be peasants. But even as the figures given by the government stand, they clearly show the situation discussed. See the readings from Prokopovitch and Sorokin in chapter ix of this *Source Book.*

[67] *Vogrojdenie,* May 1, 1928.

[68] E. le Chartier, *La France et son parlement,* Paris, 1911, p. 386; *Annuaire statistique* (of France), 1910, p. 11.

agricultural population in the total occupational population of Great Britain at that time. Moreover, these fifty agriculturists were not so much farmers as various types of landowners and gentry.[69] The situation in the United States was similar. In the Congress of 1919 there were only 19 representatives of agriculture while there should have been 165 representatives on the basis of proportionate representation.[70]

In Poland the proportion of the agricultural class among the whole occupational population is probably about 80 per cent, while among the 120,705 upper officials of the Republic (*fonctionnaires supérieurs et employés*) there were in 1923 only 1,255 or about 1 per cent whose occupation before taking governmental positions was agriculture.[71] In other countries the situation seems to be analogous. We may admit that, in some degree, farm interests may be represented by the deputies from other classes. Nevertheless, as a rule these deputies would scarcely be so devoted to agrarian interests that they would fight for them as well as would the peasant deputies. If they did, we must assume that peasant deputies could represent the interests of the nobility and the capitalists as well as deputies from those classes. This assumption is evidently wrong and strong opposition would be voiced by the nobility and the capitalists if such a measure were advocated.

It is evident that the representation of the rural class in the government, legislatures, and parliaments is far below its just share. A similar conclusion seems to follow when we consider the proportion that the various agrarian, farmer, peasant, and agricultural party groups constitute of the total number of the representatives of Congress, of Parliament, of the House of Commons, in brief the highest governing and representative bodies. Although it is difficult to make an exact computation, an estimate at least is possible.[72] According to this estimate, the representatives of agrarian parties during the years from 1920 to 1928 com-

[69] Edmond Demolins, *Anglo-Saxon Superiority: To What It Is Due,* New York, 1898, p. 206.

[70] See C. S. Barret, *The Mission, History, and Times of the Farmers' Union,* 1909, pp. 45 ff.

[71] *Annuaire statistique de la République Polonaise,* 1924, p. 199.

[72] See the table computed on the basis of the data in the Statesman's Yearbook: Statistical and Historical Annual of the States of the World, 1926; the *Statistisk Årsbok för Sverige,* 1926, p. 281; and some other sources, particularly *Peasants' Russia* (Russ.), Vols. I-XI; and the *Minneapolis Journal,* May 21, 1928, as given in Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* p. 92.

posed only from 2 to 35 per cent of the total number of representatives, or a much smaller percentage than the percentage of the agricultural population in the whole population. These data are even more significant than those concerning the former occupations of legislators. For although a governing body were composed wholly, let us say, of lawyers, the allegiance of these lawyers would be to their party constituents rather than to their profession. Agrarian parties are disproportionately small; hence the rural classes are underrepresented.

From the economic standpoint, also, the rural class does not receive its share of the national income, because the income is lower on the average than that of the urban population. Therefore, in so far as the socio-political status of a class is measured by units of income, the rural class is less privileged than the whole urban population. The cities take the lion's share. All of these are not necessarily conscious factors.[73]

A similar conclusion is drawn from a comparison of military and other duties, taxes, and levies imposed on the rural class with the amount of social service received. Although the rural class is probably less exempt from taxes, duties, and obligations than any other class and must bear its full share of the cost of social agencies—schools,[74] hospitals, churches, police, theaters, recreational facilities, sanitary and hygienic agencies, and so on—it receives far less service than the city population. In the cities there are museums, universities, laboratories, national galleries, the press, libraries, banks, and the best brains, orators, thinkers, and teachers, in brief, the best flowers of culture. In the rural communities all this is lacking. Even elementary schools, shops, primitive hospitals, or other social service agencies are less numerous and usually most elementary and primitive in quality. For a corroboration of this claim, let us study the matter of taxation, of service institutions, and so on, and ascertain whether the duties and rights

[73] See chapter xvi, dealing with political organization, in Volume II of this *Source Book*. The changes in population without reapportionment of representation have somewhat offset the underrepresentations of the farmer-peasant class. But these changes have taken place in only a few countries.

[74] For instance, in Norway in 1921 the rural population composed 70.5 per cent of the total population; rural children composed over 70.5 per cent of the total number of children of school age; while of the total sum granted for the expenses of elementary schools only 65 per cent was devoted to rural schools while 35 per cent was used by urban elementary schools. See the *Statistisk Årsbok för Sverige*, 1924, pp. 7, 206–207.

of the agricultural classes are proportionate to those of the other classes.

5. *Greater relative tax burden.*—As shown earlier in this work, farm property is primarily realty and can be hidden neither from the tax assessor nor from the tax collector. On the other hand, much urban property is personal, such as bonds, stocks, bank notes, money at interest, jewels, and bullion, which may be, and often is, easily hidden from public taxation. The assessor, moreover, generally knows the tax value of a specific piece of farm property, because it is similar to other plots of land and houses. As an illustration of real property, a city hotel may be known to an assessor, yet he is incapable of exactly setting its tax or income value, because its value depends to a considerable extent upon location, inner construction, management, and other factors not easily discernible even to practiced eyes. In consequence, differences in evaluation of property throw larger burdens of taxes upon farmers, in proportion to their ability to pay. The first proof of this is the following statement by a student of tax problems in Minnesota:[75]

There is a tendency for platted real estate in cities and villages to be assessed at a lower percentage of the sale value than farm real estate. The records of all bona fide sales in 1926 and 1927 of platted and unplatted real estate kept by the Minnesota Tax Commission show this very clearly:

Relation of Full and True Assessed Value to Sale Value (in Percentages) in Platted and Unplatted Real Estate

Region	Unplatted	Platted	Difference
44 southern Minnesota counties	85.18	75.58	9.60
12 southeastern Minnesota counties	89.72	73.47	16.25
The entire state	81.93	74.09	7.84

This undervaluation of city, town, and village property has the effect of increasing the share of state and county taxes that must be borne by farm real estate.

A second proof is given by the figures on the comparative percentages of net income paid in 1922 by agriculture and by urban industries (among those groups that paid income taxes to

[75] George B. Clarke, in Minnesota Farm Business Notes, No. 77 (mimeographed), April 20, 1929.

the United States government) in taxes other than federal income and profit taxes. We find that the agricultural and related industries, including 9,092 organizations of which 7,477 were farm corporations proper, paid 65.3 per cent of all net profits in taxes other than federal income taxes and profit taxes in 1922. In the same year the mining and quarrying industries of the United States paid 45.4 per cent in industrial taxes; the transportation and public utility corporations paid 29.4 per cent; the professional, hotel, and amusement corporations paid 28.0; banking, insurance, and so on paid 24.0; construction corporations paid 18.4; wholesale and retail trade corporations paid 16.0; and all manufacturing corporations paid 13.9 per cent. We may take these figures as fairly accurate, because the nature of a corporation as a public organization prevents it from avoiding return of taxes. Any existing discrepancies are due entirely to falsification of returns.

A study of the ratio between taxes and the profits of partnership firms in the state of New York during 1922 discloses the additional fact that agricultural partnerships paid a higher proportion of net profits in taxes than any other industry except mining and quarrying. The mining and quarrying industry was represented by only 58 firms and was not assumed to be typical. The report from which these figures were taken also reveals that even in 1919, a year of prosperity for American agriculture, the proportion of the rent from tenanted farms that was paid as taxes was very high, from about 10 to 65 per cent in different sections of the country.[76] In the years following 1919 these taxes, as compared with the rent from leased farms, increased in all states reported. In 1923 farmers of the United States paid 15.7 per cent of all "farm income" (i.e., business receipts plus or minus changes in inventories during the year) in taxes. Contrast this statement with the fact that in 1922 industries in the United States paid on the average only 4.54 per cent of *net profits* in taxes and the manufacturing corporations paid only 13.9. The year 1922 was worse financially than 1923, so that the statistics for farmers are for a better year than those for manufacturers. If the proportion spent for taxes on farms were computed on a basis of net profits, which are always a small proportion of gross

[76] For full data on the above comparison see "Farm Taxation," Yearbook of the United States Department of Agriculture, 1924, pp. 256–284.

business income, the farms would show a much higher burden of taxes than the urban industries.[77]

For an additional analysis let us consider the farm and city families studies in Minnesota during 1928.[78] The Minnesota study reveals that the urban families pay from 3.9 to 4.1 per cent of their net income in taxes on their homes, personal property, and investments other than business taxes assumed by the industries before net incomes were returned. On the other hand, farmers located around these towns paid 5.1 per cent of their gross cash receipts in taxes or 8.6 per cent of the net spendable incomes left after costs of operation of the farms, other than taxes, were subtracted. This depicts clearly the incidence of direct taxes in the two groups. The city taxpayers paid an average of $168 of their net incomes in taxes and the farm families paid $200.[79] The figures for the rural families do not include taxes on rented farms except where rented land was owned by the farm owners or tenants. An earlier study of farm families located around seven towns and villages in Minnesota reveals that the landowners paid 6.7 per cent of their total cash receipts in land taxes.[80] In six other communities the farm families (including tenants as well as owners) paid 4.8 per cent of all gross cash receipts in taxes.[81] In the villages and towns, around which the farm families were located, the average family paid 4.41 per cent of its net spendable income in taxes.[82] This percentage is comparable with the 3.9 and 4.1 per cent paid by urban families in Minnesota in 1928, in that business taxes paid before net incomes were returned are not included. It is fair to assume that business taxes, since they are paid by all business firms before net incomes are returned, are passed on to the consumer and do not bring about a reduction in the total family expenditures. The fact that this is true, as many economists have pointed out before, leads us to hold that there is a more valid method of determining the incidence of taxation upon the rural and urban classes than by citing tax payments without consideration of payments collected from a given class

[77] *Ibid.*, p. 268.

[78] Computed from the study of Minnesota family budgets by Carle C. Zimmerman in the *American Journal of Sociology*, Vol. XXXIII (May, 1928).

[79] University of Minnesota Agricultural Experiment Station Bulletin No. 255.

[80] *Ibid.*, No. 234, pp. 10, 42.

[81] *Ibid.*, No. 246, p. 9, and unpublished data.

[82] *Ibid.*, No. 253, pp. 9, 19, and 41.

not as a duty to that class but as the most economical point of seizure and collection.

Statements that do not substantiate the theory presented above are found in the reports of the National Industrial Conference Board and from the study by the Business Men's Commission on Agriculture. However, whatever the nature of the total tax payments by the rural and urban classes may be, all studies agree that the farmers pay a higher proportion of their total incomes in taxes than the average urban taxpayer. The following statements by the Industrial Conference Board confirm this:[83]

The Census of 1920 showed that the value of all farm wealth was 78 billions or approximately one-half of the value of the fixed property of the country, although farmers paid only one-fourth of the total taxes on property levied by state and local governments. From this it might be argued that the farmer does not bear his share of the general burden; but the ratio of assessed wealth to total wealth is not a good measuring rod for determining the extent of the farmer's rightful obligation. The fact is often overlooked that the farmer does not enjoy to the same extent as the urban dweller paved and macadamized roads throughout his district, luxurious schoolhouses and public buildings, complete educational facilities, museums, etc.; nor does he enjoy the comforts of adequate sewerage, piped water into his home, sanitation, and health improvements with which, in general, the city dweller is provided. True, the value of property assessable under the general property tax approximates that of the rest of the community, but the city dweller is not contented with what the farmer receives for his taxes and therefore the burden of the latter must of necessity be larger and heavier. The cost of the conveniences which government furnishes exclusively to one class of its citizens can surely not be transferred with any degree of equity to classes that neither receive nor enjoy them.

The increase from 1913 to 1922 has been fivefold for the community exclusive of the farm population, whereas if the population were accepted as the standard, it should have been three and one-half-fold. Population is, however, no better criterion of what a class should bear in the matter of taxation than property in and of itself. Proper weight must be given to the services which these various classes receive in the

[83] These statements are quoted from *Tax Burdens and Exemptions* (National Industrial Conference Board Research Report No. 64), 1923, pp. 31–32. See also *The Condition of Agriculture in the United States and Measures for Its Improvement,* Business Men's Commission on Agriculture, 1927, pp. 229–236, and Lewis F. Carr, *America Challenged; A Preface to a Point of View,* New York, 1929, pp. 217 ff. For similar statements see John D. Black, *Agricultural Reform in the United States,* New York, 1929.

community, and if the benefits derived are wholly disproportionate or incomparable, it cannot be maintained that these classes should all bear an equal burden.

A true description of the division of the burden resting on the farming portion of the population as compared with the rest of the community cannot end at this point. Taxes stated in dollars do not express the degree of burdensomeness or the capacity to pay. Taxes must be related to income before the effect of the tax can be appreciated. Table II and chart 5 show very clearly that, as related to his income, the farmer's burden of taxation was before the war and still is heavier than that resting on the remaining economic groups. The ratio of taxes to income in 1913 was 10.6 per cent for farmers as compared with 4.1 per cent for the remainder of the community. By 1922 the ratio for agriculture was 16.6 per cent while that for the remainder of the community was 11.9 per cent. It is true that while the burden on the remainder of the community has increased 200 per cent, the burden on agriculture has increased only 50 per cent, but the latter still pays more in taxes in relation to its income than the remainder of the community.

In Finland the rural communes furnished 2,949,063 of the 3,558,220 population, or 82.9 per cent, in 1920. In 1924 these rural communes furnished 2,821,339, or 84.5 per cent, of the total of 3,338,054 taxpayers. The rural communes had 58.5 per cent of the taxable income and paid 38.6 per cent of the total taxes based upon income; they had 74.7 per cent of the taxable wealth and furnished 46.6 per cent of all taxes based upon wealth. The rural communes paid 39.4 per cent of all taxes. They naturally paid lower taxes, because they had less direct service and because they were more exempt on account of having larger families to support. But it is significant that in spite of having more children and aged persons to care for, the proportion of rural taxpayers was higher than the proportion of rural to total population.[84]

Data for Sweden found in the Statistical Yearbook for 1928, Table 212, page 251, indicate that the rural classes, which composed 69 per cent of the total population in 1926, had 55.8 per cent of the total taxable income and wealth in 1927. Yet they supplied 68.7 per cent of the income and wealth taxed that year, and 70.8 per cent of all taxes paid directly to the central government.

[84] These figures were computed from the *Annuaire statistique de Finlande,* 1928, p. 244 and *passim.*

These data, when interpreted correctly, indicate greater direct taxation in rural districts.

Data for Denmark indicate that the rural population, which included 56.5 per cent of the total population and 52.6 per cent of the persons subject to income taxes, furnished 47.6 per cent of those paying income taxes and 62.1 per cent of all paying taxes on wealth. Although the rural districts paid only 29.9 per cent of all direct taxes, the proportion among them paying some direct taxes was greater than among the urban groups. The high-income classes in Copenhagen paid the greatest bulk of the direct taxes.[85]

In Russia, especially during the revolutionary years, economic life has been based practically entirely on direct and indirect taxation of the peasants. The cities and the nationalized city industries have not paid their own expenses. The deficit has been covered entirely by manifold exploitation of the peasantry, which explains the present inimical attitude of the peasants towards the cities.

In a study of Swiss peasant taxation in 1925 Laur and Nater conclude that, in some cantons, peasants pay far higher taxes than other families of the same province although they have the same amount of taxable funds. In some cantons they pay taxes equal to the nonagricultural families and in others less. However, the computations by Laur and Nater are indicative of a high peasant taxation, because the peasant computations are based upon a family "consisting of father, mother, a son of 21 years, and daughters of 17 and 13 years, respectively," while the nonpeasant computations are based upon a family consisting of husband and wife alone, without children. The larger peasant families with the same resources pay equal or higher taxes.[86]

A case of unfair taxation that applies to the United States is the protective tariff, which has been the historic American method of subsidizing many urban industries. The net effect of a tariff upon imports, according to the theories of the economists, is to make the consumer pay more for the goods upon which the tariff is levied. Of course, there are exceptions to every rule, and there are some tariffs that are imposed for other purposes than subsidi-

[85] This is computed from the *Statistisk Aarbog* (for Denmark), 1928, pp. 7, 12, 175.

[86] These data were taken originally from Publication No. 84 of the Swiss Peasant Secretariat. Our source of information was Ernst F. Laur and H. Nater, *Statistiques et évaluations agricoles,* published by the Swiss Peasant Secretariat for 1928, pp. 43–44.

zation of certain favored industries. Farm products, especially in a country like the United States, are exported rather than imported. As a result, farm products, if a few minor and insignificant ones are excepted, are not greatly benefited by tariff protection in exporting countries. Thus our agricultural group purchases much of its manufactured and urban products on protected markets and sells its own products upon world markets at unprotected prices. This, in essence, is the quarrel between manufacturing groups and the American agrarian parties that have backed such measures as the McNary-Haugen bill and export bounties for farm crops. It must be indicated that tariffs are very complicated economic issues. Many economists have begun to doubt the extreme effect once attributed to tariffs. Nevertheless, the fact remains that if any benefits at all are attained from the keeping or the raising of tariff bounties on imports in the United States these have accrued primarily to cities. The existence of these tariffs is in itself an indication of the lower socio-political status of the rural groups.[87]

6. *Summary of comparative tax burdens.*—Data have been presented concerning the tax burdens of the agricultural class, including the protective tariff for American farmers. These data tend to show equal or greater taxation of the farmer-peasant class, especially when ability to pay is taken into consideration. We do not wish to give the impression that we think that we have exhausted this subject. On the contrary, the incidence of taxation is a most elusive and intricate problem in economic theory. A bibliography containing the important works on taxation alone would fill more space than one of these volumes. We are trying to prove that the farmer participates as much in the tax burdens of the country, in proportion to his ability to pay, as the other classes. When, however, the farmer does not participate in the advantages of his country as much as individuals of other classes, or when his proportional participation in taxation is greater than his participation in these advantages, we have discrimination. Our data tend to prove that discrimination exists. Migration is a factor in bringing about the situation. The farmer-peasant class gives birth to, supports, and educates the majority

[87] See John D. Black, "The McNary-Haugen Movement," *American Economic Review,* XVIII, 405–427 (September, 1928); and also Frank W. Taussig, *The Tariff History of the United States,* 5th ed., New York, 1910, pp. 249, 274, and 367.

of the children in the world, and these children migrate to cities as self-supporting adults. Their migration cuts down the tax-paying burden of the urban class more than it adds to it.[88]

7. *Inadequate poor-relief facilities.*—The next series of facts that corroborates the theory of the lower socio-political status of the rural class is obtained from the studies of poor relief in the rural and urban districts. Need for poor relief is greater among males than among females, and among the younger and older age groups than among the middle groups. There are more children and more aged in the rural than in the urban population, and therefore there should be higher rates of poor relief. The data on paupers and persons given poor relief show a contrary situation; rural classes have lower rates of poor relief. The differences between rural and urban populations in rate of poor relief are explained by four factors: (1) the integrity of the rural families in assuming the responsibility of supporting the dependent members; (2) the more even distribution of wealth in rural districts, where each family or person has a greater chance for financial independence in old age; (3) a keener vision of the future on the part of the rural classes, especially in comparison with the lower urban classes, that brings about greater saving and insures independence in old age; and (4) the lower rate of mobility of the rural people, which prevents the individual from getting lost in the social shuffle. Studies reveal that migrants and immigrants have greater rates of poor relief than the native born in a country.[89] But after we have eliminated the differences in the poor-relief rates explained by these four factors, there is still a higher rate in the city, when the populations are standardized according to sex and age groupings. The higher urban rate is due to the fact that the rural classes participate less in public services than the urban. When a city family goes below the poverty line, it has a greater chance of relief by a charity organization than a rural family similarly situated. Rural districts have relatively fewer charity organizations, poorhouses, asylums, agencies for outdoor relief, social workers, and so on.

In the United States in the Census of 1910 the following num-

[88] See the United States Department of Agriculture, Bureau of Agricultural Economics, *Bibliography of the Literature of Rural Life*, 1924, No. 25.

[89] See the United States Bureau of the Census, *Paupers in Almshouses*, 1910, pp. 23–26; 1923, pp. 19 ff.

bers of cases of paupers given relief in almshouses were reported for various occupations:[90]

Occupations of Male Paupers Prior to Admission to Almshouses in the United States, for Those Ten Years of Age or Over Whose Occupations Were Known

Occcupation	Enumerated Jan. 1, 1910	Admitted during the Year	Percentage of All Enumerated	Percentage of all Enumerated during Year
Common laborer	10,197	17,213	19.7	29.7
Farmers, planters, and dairy farmers	6,255	2,707	12.1	4.7
Agricultural laborers	5,605	4,491	10.8	7.8
Mine workers	1,919	2,225	3.7	3.8
Carpenters and joiners	1,792	1,697	3.4	2.9
House servants	1,457	1,991	2.8	3.4
Railroad laborers	1,214	1,383	2.3	2.4
Boot and shoe factory operatives	1,092	1,856	2.1	1.5
Draymen and teamsters	1,089	1,528	2.1	2.6
Iron and steel workers	1,016	1,142	2.0	2.0
Painters, glaziers, and varnishers	1,012	1,507	2.0	2.6
All other occupations	19,159	21,148	37.0	36.5
Total	51,807	57,888	100.0	100.0

This table shows that, out of the 51,807 whose previous occupations were reported, farmers, planters, dairy farmers, and agricultural laborers comprised 11,860 of the occupants of almshouses ten years of age or over. Thus 22.9 per cent of the persons who received poor relief from almshouses were from the agricultural group. Contrasted with this is the fact that males ten years of age and over in agriculture, forestry, and animal husbandry comprised about 36 per cent of all gainfully employed during that year. If the populations were standardized according to age groups, the lower proportion from the agricultural class would be much more evident. The most valid comparison may be made from the admissions during the year, because longevity and sta-

[90] *Ibid.*, p. 40.

bility of the inmates bias the statistics on those resident in almshouses. Of those admitted for the first time the rural classes furnished 7,198 or 11.6 per cent of all who reported their previous occupations. Although this study does not definitely prove a greater urban participation in the relief of charitable agencies in the United States, the enormous differences between the rural and urban rates and the fact that previous studies for the United States reveal the same relative differences make the conclusion highly probable.[91]

The conclusion drawn from the United States data is more probable because it is similar to the available data for England and Wales and some of the other European countries. As far as known, there is no conflicting report in any country studied.

The table below gives the proportions securing poor-law relief in England and Wales for all causes (excluding casuals) during the years 1914 to 1924 in the rural and urban districts.[92]

Poor-Law Relief Rates per 10,000 in England and Wales, 1914–1924, Computed about January 1 Each Year
(Exclusive of Casuals)

Year	London	Extra-Metropolitan Districts	All Other Districts	England and Wales
1914	279	192	205	208
1916	237	169	186	184
1918	203	141	162	156
1920	189	142	159	154
1922	537	457	267	394
1924	528	405	240	357

This table indicates that the incidence of poor-law relief is higher in London than in the other districts every year. Some of this relief is for unemployment, and some is for old age and disabilities. During a number of years the rates were higher in "all

[91] "Retired with a Competency," and "Dependents upon Public or Private Charity," Massachusetts Bureau of Labor Statistics Bulletin No. 25, 1903, pp. 15–28. These studies show that farmers had a lower rate of "dependents upon charity" and a higher rate of those "retired with a competency," than the total urban population.

[92] See "Persons in Receipt of Poor-Law Relief in England and Wales . . . ," British Sessional Papers, Vol. XIX, 1924, pp. 7 ff.; and Parliamentary Papers, 1922, No. 172, and 1923, No. 121. For a 1912 comparison see *London Statistics*, Vol. XXXIII, 1927–1928, p. 131. The London rates were higher than the rural districts in every year since 1862, which was the first reported. See page 139.

other districts" than in the extra-metropolitan boroughs. This was due not to the inclusion of rural districts but to the inclusion of smaller cities in the group termed "all other districts." Other studies bring this out.[93]

These British studies also reveal that there is proportionately more rural outdoor relief than indoor relief. This is the result of the family organization of rural life and attests to the fact that the proportion of those who require state support but who have saved something for themselves is greater in rural districts. During the year 1924 the proportion of all who secured relief and were placed in institutions in the city of London was 45 per cent as compared with 27 per cent in the rural districts of England and 34 per cent in the other cities.[94]

By far the most important source of information about poor relief in England and Wales is to be found in a table, given below, in the Report of the Royal Commission on the Poor Laws and Relief of Distress, which was published in 1909.[95]

This table is presented following certain contradictory data that tend to show higher crude rates in the rural districts during some earlier years. The results are analyzed in the report as follows:[96]

From whatever standpoint we look at the statistics for the urban areas they suggest a very unsatisfactory condition regarding the persons relieved. Not only has the reduction in their rate of pauperism been small and the increase in the number of men relieved been large, but the recurrence of relief is frequent, and a large proportion of persons resort to the Poor Laws for very temporary and trivial reasons.

But it must be stressed that studies show that in 1891 the crude rate of pauperism in the rural districts was 33.8 per 10,000 population, as compared with 18.4 in London and 22.8 in England

[93] See the Census of England and Wales for 1901, 1911, and 1921 concerning the previous occupations of persons in poorhouses. Also consult the statistics on the occupations of those retired without state relief. Of the number retired in 1910 farmers had a rate of 8.83 per cent. Among 34 of the largest occupational groups only 2 had a comparatively high proportion of employes retired without state aid. A careful study of the last three decennial census reports according to occupation is given by D. Caradog Jones, in the *Journal of the Royal Statistical Society,* LXXXIX, 694 (1926).

[94] British Sessional Papers, Vol. XIX, 1924.

[95] Report of the British Royal Commission on the Poor Laws and Relief of Distress, 1909, pp. 32–34 and *passim.*

[96] *Ibid.,* p. 35. For further corroboration see pp. viii ff. of "Pauperism," British Sessional Papers, Vol. I, 1906–1907.

RURAL AND URBAN RATES OF POOR RELIEF PER 1,000 POPULATION OVER SIXTY YEARS OF AGE IN ENGLAND, 1906–1907

LOCATIONS OF UNIONS	NO. OVER 60 PER 1,000 POPULATION (1901)	PAUPERS OVER 60 (1906) PER 1,000 POPULATION OVER 60 (1901)	NO. OF PAUPERS PER 10,000 POPULATION (1906)		NO. RELIEVED PER 1,000 ESTIMATED POPULATION DURING YEAR ENDING SEPTEMBER 30, 1907	RATIO OF YEAR'S COUNT TO MEAN OF DAYS' COUNTS (1907)	PERCENTAGE RELIEVED FIVE TIMES OR MORE (1906–1907)	PERCENTAGE RELIEVED FOR ONE WEEK OR LESS
			Crude	Standardized by Sex and Age				
London	66.9	187.1	27.8	29.83	71.3	2.79	3.7	14.0
Extra-metropolitan districts								
Wholly urban ...	63.0	152.8	23.2	25.33	49.7	2.47	1.7	14.8
Partly urban (in percentages)								
75 and over...	64.3	142.8	21.5	22.98	40.7	2.12	.8	11.8
50–75	81.6	148.3	24.7	23.29	40.6	1.79	.6	10.0
25–50	98.6	166.4	30.3	25.46	49.2	1.71	.6	7.7
Below 25	107.0	171.3	33.2	26.74	52.0	1.58	.6	6.3
Wholly rural....	104.8	160.9	30.3	24.28	50.7	1.74	.4	7.3
England and Wales	74.0	157.7	25.1	25.11	48.9	2.15	1.5	11.9

and Wales. The same relative rates were reported for the years 1895, 1900, and 1905, but they made no allowance for age and sex differences. The tables indicate that before 1895 the crude rates for London were lower than those for all England and Wales, and after that year, higher. These inconsistencies in the English data are confusing, but the material suggests that they are due to differences in registration rather than differences in fundamental rural-urban factors. Our final conclusion is that the incidence of poor-relief cases in England is greater in the urban than in the rural districts.

Ducpétiaux reached the same conclusion from his studies of Belgium during the years between 1818 and 1849. The data reveal that in Flanders a low percentage of the country people received poor-law relief every year except during the years from 1845 to 1848. These four years were exceptional because of crop failures

in the rural districts and a decline of the linen and weaving industry in the villages. Of a total of 171,681 poor-relief cases in West Flanders in 1847 who were classified as rural, 14,645 were linen weavers, 39,556 were thread-makers, 30,892 were day laborers, 2,689 were tobacco factory workers, and 2,319 were cultivators. The rest consisted of the unemployed members of the families. Including agricultural laborers, cultivators, and members of their families, only 35,990 of the total 171,681 were connected with agriculture. The table below presents data from Ducpétiaux's work.[97]

Percentage of Persons in City and Country Receiving Poor-Law Relief in Flanders, 1818–1848

Year	East Flanders		West Flanders	
	City	Country	City	Country
1818	14.5	9.6	..	..
1836	18.5	10.6	..	..
1840	17.8	11.8	..	..
1841	18.0	12.2	..	..
1842	17.0	13.1	..	..
1843	17.2	14.1	31	19
1844	17.8	14.5	..	..
1845	20.4	21.6	..	..
1846	23.6	28.2	37	35
1847	24.6	29.5	37	37
1848	24.9	26.8	32	35

After 1848 the rates showed a trend towards the normal condition, there being more relief cases in the cities than in the rural districts. When it is considered that rural families were larger and that there were greater proportions of children and aged persons in the rural than in the urban districts, it is seen that rural districts do not have greater dependency. That they do not is further established in a study made by the same author a few years later. In this is a table, given below, which indicates the proportions of paupers or persons in receipt of poor relief in the rural and urban districts.[98]

[97] Édouard Ducpétiaux, *Mémoire sur le paupérisme dans les Flandres,* Brussels, 1850, pp. 19–25.

[98] *Budgets économiques des classes ouvrières en Belgique,* p. 189.

NUMBER OF PERSONS FOR EACH PAUPER IN THE CITIES AND RURAL DISTRICTS OF FLANDERS, 1848–1853

PROVINCE	1848–50		1853	
	Cities	Rural Districts	Cities	Rural Districts
Anvers	3.58	10.49	...*	...*
Brabant	4.40	3.94	4.63	4.15
West Flanders	3.10	3.43	3.33	3.69
East Flanders	4.51	4.04	4.54	4.09
Hainaut	3.88	5.20	3.50	4.58
Liège	4.22	5.85	4.73	6.06
Limburg	3.18	6.51	3.44	5.75
Luxembourg	16.30	35.86	23.02	17.38
Namur	3.82	7.26	....*	....*

* Not given.

Although these crude rates underestimate the position of the country districts and overestimate the position of the cities, yet, even so, they indicate higher rates of pauperism and poor relief in the cities than in the country districts.

In Finland in 1927 only 15.5 per cent were city taxpayers, but the urbanites comprised 36.4 per cent of the inmates in almshouses (*maisons de charité*) and 25.4 per cent of all persons receiving public relief of all kinds (almshouse inmates, pensioners, recipients of outdoor relief, and so on). If children are eliminated from the groups securing relief, there is a slightly higher proportion still in the cities.[99]

Statistics on all forms of public assistance to paupers or poverty-stricken persons in Sweden reveal that as far back as the records go (1870) there has been a greater incidence of such cases in the urban than in the rural districts. The table below gives the crude rates.[100]

[99] These data were computed from the *Annuaire statistique de Finlande,* 1928, p. 222 and *passim*. Of 37,261 paupers in almshouses, 13,565 came from the cities; of 3,338,054 taxpayers, 516,715 were residing in the cities; of 3,558,220 population (1920), 609,157, or 17.1 per cent, were residing in the cities; of 74,922 persons in receipt of other forms of public charity, 14,866, or 19.9 per cent, were residing in cities.

[100] From the *Statistisk Årsbok för Sverige,* 1928, Table 211, p. 250. See also *Poor Relief in Different Parts of Europe,* trans. from the German, ed. by Arwed Emminghaus, London, 1873, pp. 194–195 for Sweden; pp. 200 ff. for Norway; and p. 211 for France.

NUMBER OF PERSONS PER 10,000 POPULATION RECEIVING PUBLIC ASSISTANCE IN SWEDEN, 1874–1905

YEAR	RURAL COMMUNES	URBAN COMMUNES	YEAR	RURAL COMMUNES	URBAN COMMUNES
1874–1875	402	665	1906–1910	364	642
1876–1880	415	659	1911–1915	356	678
1881–1885	443	697	1916–1920	344	657
1886–1890	440	961	1921–1922	365	621
1891–1895	446	846	1923–1925 *	447	667
1896–1900	409	748	1926 *	454	676
1901–1905	387	667			

* The reorganization of the statistics in 1923 makes the results in the years following incomparable with those in the years previous. A slight depression in 1924 caused the rates to be somewhat higher in the later years. Rates in this table relate to persons in almshouses and hospitals, to other institutional relief cases, and to all outdoor relief.

In spite of age and sex differences in favor of the city, the rates in the city were higher in every year and in every period of years. The table below standardizes the rates for 1926 according to age. The original source standardizes the rates according to both sex and age in the rural and urban districts, but this is the only portion reproduced here.[101]

POOR-RELIEF RATES IN RURAL AND URBAN DISTRICTS OF SWEDEN, STANDARDIZED ACCORDING TO AGE AND PLACE OF RESIDENCE, 1926

AGE GROUPS (BOTH SEXES)	RATE PER 10,000 POPULATION		AGE GROUPS (BOTH SEXES)	RATE PER 10,000 POPULATION	
	RURAL	URBAN		RURAL	URBAN
0–16	490	910	60–67	510	1,020
16–30	150	190	67–75	900	1,910
30–50	310	390	75 and over	1,990	3,340
50–60	360	560	All ages	454	676

The rates for urban districts were higher than those for the rural in each age group. The figures indicate that urban families shifted the care of their young and aged persons to the state more than did the rural families.

Statistics reveal that Denmark has the same relative proportion of poor relief.[102] The population in the rural districts (56.5 per

[101] *Ibid.*, p. 251, Table 212.
[102] *Statistik Aarbog* (for Denmark), 1928, pp. 11, 12, 127; 1926, Table 138.

PERCENTAGE DISTRIBUTION OF PAUPER POPULATION IN DENMARK

CLASSIFICATION	CAPITAL	PROVINCIAL CITIES	RURAL DISTRICTS	ALL DENMARK
Group receiving poor relief, 1926–1927	24.5	37.4	38.1	100.0
Group receiving poor relief, 1925–1926	25.4	36.5	38.1	100.0
General population census of 1921	21.6	21.9	56.5	100.0
Group subject to direct taxation, 1927–1928 *	25.1	22.3	52.6	100.0

* This group includes all those 18 years of age or over, other than married women.

cent of the total) furnished only 38.1 per cent of the persons receiving public relief in 1925–1927. The cities furnished only 43.5 per cent of the population, but 61.9 per cent of all persons in receipt of relief. The urban rates were still greater when compared with rural districts on the basis of adult population subject to direct taxation. In 1925 the rate of public aid, direct or indirect, in the capital was 278 per 10,000 residents, and 378 in the provincial cities, as compared with 150 in the rural districts.

In Bavaria in 1912, the last normal year before the War, the rate for the entire state was 35 per 1,000 population as compared with 78 for Munich, 74 for Nürnberg, and 40 for Augsburg. The rates for the three provinces in which these cities are located were as follows: Upper Bavaria, 47; Middle Franconia, 43; and Swabia, 26. When the casual paupers were eliminated and the permanent ones studied separately, the rate for the entire state was 18 and for the three cities, 42, 42, and 22, respectively.[103]

8. *Summary of poor-relief facilities.*—This series of data revealing the extent of pauperism and state aid to poor persons could be extended if the sources for other countries were at hand. They agree that with one exception—England during the earlier years—all countries included a greater number of paupers and of persons receiving state aid in cities than in rural areas. Even this exception is not admitted in the latest studies. Moreover, the English census reports of 1901, 1911, and 1921 do not confirm the statistics presented in the first pages of the report of the

[103] *Statistisches Jahrbuch für den Freistaat Bayern*, 1919, p. 410.

Poor Laws Commission of 1906. We are inclined to agree with the general census reports and with the more carefully standardized statistics compiled in later years. Finally we conclude, without presenting more data, that there is a general correlation between urbanization and increase of state aid to the poor, between urbanization and decrease of individual and family responsibility for dependent members, and between urbanization and the care of the unfortunate classes by the community. Whether it is good or bad, harmful or helpful, we cannot say. Our point is that the same privileges are not accorded to the rural and the farmer-peasant class as are granted to the urban class.

9. *The distribution of economic and professional services.*—The opportunity of the farmer-peasant class to participate in certain types of professional, economic, and social services has generally been less than that of the other classes. C. Luther Fry has summarized as follows the data as to certain types of professional services in the rural and urban communities in the United States:[104]

Number of Physicians, Dentists, and Nurses per 1,000 Population in Village Communities * and Medium-Sized Cities in Various Sections of the United States, 1920

Group	Middle Atlantic	Middle West	South	Far West
Physicians in				
Village communities				
Small	1.2	1.4	1.0	1.1
Medium	1.3	1.2	1.2	1.1
Large	1.1	1.2	1.1	1.4
Medium-sized cities	1.6	2.2	2.1	2.0
Dentists in				
Village communities	0.7	1.0	0.6	1.2
Medium-sized cities	0.5	0.7	0.4	0.6
Nurses in				
Village communities	2.4	3.1	2.9	3.2
Medium-sized cities	0.5	0.5	0.2	0.6

* A village community is the village and surrounding retail trade basin. The inclusion of the families trading in the village is necessary in order to make the data comparable with those of the cities.

[104] C. Luther Fry, *American Villagers,* New York, 1926, pp. 123 ff. For an account of the lack of physicians in the rural districts see a study of the "Rural Medical Situation," *Farmer's Wife,* May and June, 1929.

It is evident that many farmers go to towns and cities for hospital and medical services, because there are fewer professional men in the rural districts than in the urban. Another table in the work of Fry discloses that in many of the smaller, medium-sized, and large villages there are only a limited number of different types of professional men. It shows that in the smallest of 177 villages studied school teachers and physicians were the only types of professional persons living in them. On the other hand, in the largest villages studied (towns of about 2,500 population) there were teachers, clergymen, physicians, and lawyers. In the best one-fourth of these large villages or small towns there was an average of 36 teachers, 7 clergymen, 6 physicians, 9 lawyers, 4 dentists, 5 musicians and music teachers, 2 veterinarians, and 2 trained or registered nurses. His analysis shows further that, according to statistics on various villages in different sections of the United States, "other professionals"—other than the nine classes named above—constitute only from 11 to 24 per cent of the total professional classes, whereas in 38 comparable medium-sized cities the "other professionals" constitute from 31 to 50 per cent of all professionals.[105]

These data for the United States summarize a general situation concerning which data are so numerous that they can only be mentioned. Studies of the distribution of all the professional classes indicate clearly and unquestionably that the rural classes have fewer opportunities to come into contact with professional men or obtain professional service than the urban classes. Not only are there relatively fewer professional persons in the country, but there are fewer public agencies to aid in their advancement. Public hospitals, free clinics, continuation schools, agencies for the dissemination of free legal advice, settlement houses, free lectures, public art galleries, public school nurses, and county health officers are primarily urban institutions.

In addition to the greater concentration of professional service in the cities and its comparative absence in the rural districts, there are certain differences in the quality of professional services in the country and in the city, which may further tend to place

[105] *Ibid.*, Tables LV and XLV. See also Lewis Mayers and Leonard V. Harrison, *The Distribution of Physicians in the United States,* New York, 1924. See especially the careful study by C. R. Hoffer, "A Study of Town-Country Relationships," Michigan Agricultural Experiment Station Bulletin No. 181, 1928.

the rural classes at a disadvantage. The professional classes in the country districts have on the whole a higher proportion of beginners or amateurs in their ranks, a smaller proportion of specialists and highly trained men, and a greater proportion of persons who have not the ability to make good in the more competitive professional positions in the cities. That is, in addition to certain quantitative differences between the urban and the rural distributions of the professional class, there are also qualitative differences that are more favorable to city populations.

There is a plethora of statistics for all countries concerning the presence of untrained and less highly trained rural teachers and rural ministers; the substitution of midwives and practical nurses for physicians and registered nurses; and the prevalence of general practitioners, in law, medicine, and the teaching professions especially, in place of specialists in the respective fields. A recent study shows that in the rural districts of the United States the ratio of medical specialists to general practitioners was 1 to 34; in towns of 5,000 population, 1 to 3.6; in towns of from 10,000 to 25,000 population, 1 to 2; in cities of 50,000 and over, 1 to 1.7; in metropolitan centers, 1 to 1.3; in industrial centers, 1 to 2.5; and in the United States as a whole, 1 to 7.5.[106]

10. *Conclusions concerning socio-political discriminations.*— We see, therefore, that the lower socio-political status of the farmers, as compared with that of the urbanites, is rather certain. Since rural people are scattered over a wide territory and consequently have more difficulty in achieving efficient organization, since they lack contact and communication, and since they do not have much concentrated wealth, the press, and other "powers," the rural class has been unable to compete with the city in protecting its socio-political status, and the city has been able to dominate and to take advantage of the rural class in several respects. The comparative remoteness of the class from the seat of government also creates a lack of interest on the part of the government. The city masses, on the other hand, are near the seat of government—a fact that helps to make it sensitive to their interests. For this reason it is dangerous to annoy the government in regard to farmers and peasants. It is much safer to say, "They are too far away and too slow to organize." This is relatively true in the

[106] Harold S. Stevens, "A Survey of the Physician's Income," *Medical Economics*, March, 1929, pp. 14 ff.

United States. It is even more true in Europe and on other continents.

When compared with individual urban classes, the socio-political status of the rural class is revealed to resemble that of the less privileged urban labor classes more closely than that of the privileged groups of nobility, the aristocracy, or the wealthy and professional classes. The truth of this statement is so self-evident that it requires no defense.

V. CONCLUSIONS CONCERNING FARMER-PEASANTS AS A SOCIAL CLASS

This chapter depicts the rural class as a *sui generis* class, different from any other large class. It occupies a peculiar position and cannot be identified with any other class, nor can it be expected to be permanently and consistently united with any class—urban labor, capitalist, professional, or any other. If the status of the rural class resembles that of another class in one respect, it may be dissimilar and opposite in another respect. We expect, therefore, on the basis of this analysis of the social position of the farmer-peasants only a temporary union with any one of these other classes when, according to circumstances, there are common interests in one or two respects. As soon as the object of the interest is achieved or other issues become more important, their lines of policy may diverge, and yesterday's partners may become today's enemies. History reveals that the rural class has sometimes joined with the upper or middle urban classes against the lower city classes and sometimes has turned against the upper or middle classes and joined the labor class. Such shifts in allegiance have been common, and they are comprehensible if we consider the peculiar class position of the agriculturists. The shifts have been less an adaptation to one of the classes than a systematic attempt to promote the interests of the agriculturists, in the execution of which they have been willing to unite with any other classes that happened to be working for the same ends. As long as the interests coincided these fusions lasted. This has been the situation in the past; it is also true at the present time.

A mere glance at the modern agrarian movement is sufficient to make this clear. In the platform and policies of the Agrarian International party and in those of numerous peasant parties in various European countries, such as Czechoslovakia, Switzerland,

Poland, Bulgaria, Yugoslavia, Rumania, Latvia, Esthonia, Finland, Germany, and Hungary, we see very distinctly that peasant organizations do not fuse with parties and unions fighting for the interest of the urban labor classes or with those representing the interests of the aristocracy, the landlords, the capitalists, or the professional groups.[107] Peasant parties have an individual policy and individual concepts different from those expressed in the political platforms of the proletarian class and of the bourgeoisie or professional groups. The general term for the peasant political ideology is "agrarianism." It is as different from socialism, communism, individualism, liberalism, and conservatism as are the respective ideologies of the upper and lower urban classes. One of the leaders of the international agrarian movement and of the powerful Agrarian party in Czechoslovakia, Dr. Milan Hodža, minister of education, says that "liberalism failed to serve as a basis for farmers' ideas and organizations. Socialism is equally unsatisfactory. The idea of collectivism failed also. All this is superseded by agricultural democracy" as a new concept of the agrarian movement in agricultural classes.[108]

In ideologies as well as in policies, the farmer-peasant parties portray very clearly all the traits differentiating the status of this class from that of the other classes that have been analyzed. During the last few years these parties, in carrying out their own policies, sometimes joined on a particular issue with the labor parties, sometimes with the capitalist parties, and sometimes they opposed all the urban parties. In the chapter on the political attitudes of the rural class, we show this clearly. For the present it is sufficient to say that, on the basis of this analysis, any hope for long and harmonious "farmer-labor," "farmer-capitalist," "farmer-landlord," or "farmer-proletarian" parties and unions appears to be merely a utopian ideology. Temporary fusion with any of these groups is possible up to a certain point; long-lived unions will become possible only when the farmer-peasant class ceases to be what it has been.

Studies concerning the characteristics of the farmer-peasant class

[107] See chapter xvi, which discusses rural political organization.

[108] For the essential tenets of agrarianism see the address by Dr. Milan Hodža in the Bulletin of the Czechoslovak Academy of Agriculture, 1928, IV, 441; Pitirim A. Sorokin, *Ideology of the Agrarian Movement* (in Russian, Bulgarian, and Serbian); and the papers of Charles Mečir, general secretary of the International Agrarian Bureau at Prague, in the Bulletins of the Bureau.

are so numerous and have such a long history that anything like a fair presentation in the readings would cover several volumes in itself. We have had to choose between the alternatives of presenting many detailed tables in the text that would serve as examples of the more important studies and of quoting a few readings that could not be as representative. We have chosen to give numerous tables and an analysis in the text, on the ground that such an analysis would be most helpful to the student investigating these phases of rural life. Consequently, the following readings are merely small examples of a large number of studies and are not as high a proportion of the whole as the readings in some of the other chapters. We hope that the presentation of the detailed tables in the text will compensate for the omission of numerous readings.

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————, *Statistiques et évaluations agricoles* (Bruges, 1928), No. 5, pp. 49–52. This gives some comprehensive estimate of food consumption by Swiss peasants. Pages 53–60 give the results of farm management cost studies in Swiss agriculture.

UNITED STATES

Studies in this country are very numerous. See Louise O. Bercaw and Mary G. Lacy, "A Selected Bibliography on Rural Standards of Living," U. S. D. A. Miscellaneous Publication No. 116, and Faith M. Williams and Helen Connelly, of the United States Bureau of Home Economics, "Bibliography on Studies of Costs and Standards of Living in the United States."

Most of the studies have been published in experiment station bulletins and will be found listed under the following names: W. A. Anderson; P. G. Beck; J. D. Black; E. C. Branson; Grace Brenton, E. de S. Brunner; Helen Canon; P. P. Denune; J. A. Dickey; Dorothy Dickins; W. C. Funk; Wilson Gee; Edith Hawley; H. B. Hawthorn; H. W. Hawthorne; C. R. Hoffer; E. E. Hoyt; O. R. Johnson; E. L. Kirkpatrick; Hildegarde Kneeland; J. H. Kolb; W. F. Kumlien; Hazel Kyrk; C. E. Lively; J. E. Lockwood; Hughina McKay; T. S. McMahon; B. L. Melvin; E. L. Morgan; Lowry Nelson; W. D. Nicholls; C. V. Noble; F. W. Pecke; J. O. Rankin; J. T. Sanders; Dwight Sanderson; C. B. Sherman; N. L. Sims; W. H. Stauffer; C. C. Taylor; H. C. Taylor; J. F. Thaden; R. B. Vance; G. H. von Tungeln; F. M. Williams; F. E. Ward; Mrs. C. G. Woodhouse; F. R. Yoder; C. C. Zimmerman. See also Raymond Pearl, *Studies in Human Biology* (Baltimore, 1924), p. 419, and yearbooks of the United States Department of Agriculture, 1920–1923, 1924, and 1925. The first three yearbooks give data on food consumption in the United States and the last gives a comprehensive summary of all studies of farm budgets in the United States carried on under the supervision of the farm management routes.

188. The Cost of Living in Swedish Rural Districts in 1920*

The principal aim of this inquiry has been to verify, by means of a normal budget of rural persons who are only moderately well to do (*peu aisés*), the conclusions that the study of 1913–1914 had established[1] concerning the costs of living among urban laborers. The earlier study was carried out by the Royal Administration of Labor and of Social Foresight of Sweden. The results obtained are most clearly shown by comparing the conditions of living in the country and in the city. One circumstance has created some difficulty; this is the fact that both studies do not cover the same period of time. The marked changes that have occurred in the level of prices in the interval separating these two studies affect the results of the comparison. In the cities and semi-urban localities the prices of necessary foodstuffs, of heat, and of light increased about 198 per cent from 1914 to 1920, while the total increase in general cost of living was only about 169 per cent. This increase has been subject to many variations in regard to the different material items that compose the budget of persons of moderate means; from this it follows that despite acquired habits consumers have undoubtedly attempted to modify their consumption in order to adapt themselves to the new price conditions. Since we do not yet have sufficient information to tell us the degree to which these price changes have influenced living conditions in the country and the city, it is necessary to assume for this comparison that the quantitative budget that was established in 1913–1914 is also a fair representation, at least in the general outlines, of the living conditions of persons of moderate means in the cities in 1920. We must further assume that the budget of expenses will have changed little in size or composition as a result of the increase in prices that has occurred in the interval.

The two inquiries are similar in method. The 1920 study used the same booklets as were used in 1913, in which the head of the household or the housewife entered the cash receipts and expenditures in the proper places and opposite the correct date. As receipts were in kind in rural places, it was considered necessary to require a special account in which were entered the amounts and value of the provisions produced by the consumer and those furnished him by the employer.

This inquiry concerning living in the country covered 372 households of agricultural workers and artisans; most of the accounts were

* Taken from Sveriges Officiella Statistik, Socialstatistik, *Levnadskostnaderna på landsbygden i Sverige vid år 1920,* av K, Socialstyrelsen, Stockholm, 1923, pp. 136–139.

[1] *Levnadskostnaderna i Sverige 1913–1914,* Del. I, "Utredningers huvudresultat." (*Les budgets de ménage en Suède en 1913–1914,* Vol. I, "Résultats principaux de l'enquête," Stockholm, 1921).

for 1920. Among those studied were 200 workers with mixed income; 43 tenants, 86 day laborers who had no land, and 43 who had a plot of land. In general, the families were a little larger than those previously studied in the cities. According to the account books, the families of agricultural workers averaged 5.04 members and 3.73 consumer-units according to the American scale of consumption; in the cities the figures were 4.44 and 3.32.

From the economic point of view the rural households seem to have enjoyed a somewhat less favorable situation than those of the cities even when the inferior purchasing power in the cities was considered. The average rural income was 3,783 crowns and the average urban income (calculated on the basis of 1920 prices) was 4,987 crowns; this is, 1,002 and 1,504 crowns per consumer-unit, respectively. The difference becomes still greater when one considers that the agricultural worker spent 365 crowns of his gross income for costs of operation of the farm (purchase of animals, feed, and implements, and so on). This leaves only 3,418 crowns per family or 903 crowns for each consuming unit to be spent entirely on family living. Of this total, 61.1 per cent was obtained in cash and 38.0 per cent in kind in the form of gratuitous lodging, fuel, and provisions raised by the family or furnished by the employer, while the urban workers generally received only a cash income.

A comparison of the returns from incomes as given in the budgets of urban and rural workers with the general statistics of salaries shows that the urban sample represents a group that is economically distinctly above the average of urban persons of moderate income. The families of agricultural workers can, however, be considered as representative of this class in the country, since their incomes are but little above the general level of incomes for that class. Thus it was deemed wise in comparing country and city to represent the urban workers not only by the 1,355 households in the 1913–1914 study but also by an additional sample from this group including only those whose incomes were in close agreement with the average income of urban industrial workers. The tables presenting the results of this study of rural living conditions give the average for all agricultural households studied. For the urban households two series of figures are given: series *a* is for all families studied in 1913–1914, while series *b* concerns only 351 families for which the income of the head of the family corresponds to the mean income of workers in cities and in semiurban communes.

The data of Table HH [omitted here] show that about 60 per cent of the expenditure of rural households is for food, whereas 47 and 35 per cent is spent by the urban workers; this is true despite the fact that

the rural food budget is based largely on prices of coarse foods. The expenses for tobacco were also higher in the country (1.0 per cent) than in the cities, where 0.6 and 0.7 per cent was spent, while 0.3 per cent was spent for coffee and other beverages in the country as compared with 0.9 and 1.5 per cent in the cities. Expenses for liquor were virtually equal, 1.2 as compared to 1.2 and 1.3 per cent. The percentages in the table indicate that the noticeable differences between city and country in expenses for lodging that existed before the World War had greatly diminished by 1920, the percentage of renters among the urban workers having greatly decreased in that time. There seems to be no great difference in expenses for clothing. The items of clothing should cost less in the country than in the city, since rural mothers make a great share of the family clothing themselves, while urban workers are generally obliged to buy all of their clothes. The fact that clothing requires 15 or 16 per cent of the budget both in the country and in the city seems to confirm the current claims that agricultural work imposes exceptional strains on clothing and shoes because of the outdoor work, frequently in inclement weather. Rural families spend a tenth for "other goods" but city families 13 and 20 per cent. Expenses especially for intellectual needs, membership fees in organizations, insurance premiums, taxes, and small amusements are less in the country.

Table II [omitted here] presents the differences in the diet of rural and urban families. There is reason to believe that the percentages found for 1920 give a partially deceptive picture of the relative composition of the actual food budget in the sense that the figures just cited presuppose that the purchases have not changed and that the variations that occurred from 1913–1914 to 1920 reflect only changes in prices of particular items. Nevertheless, one is forced to draw certain conclusions despite gaps in the data. One finds that the expenses for meat and lard in the budget of city workers came to 13 and 16 per cent of the total food expenses, while the figure for rural families was 18.5 per cent. The city workers, in turn, spent much more for delicatessen products (as separate from butcher-shop products). The consumption of fish and butter is of relatively equal importance in both budgets. Expenses for milk and cream required more than a fifth of the rural food budget but only a seventh or eighth in the cities. On the other hand, the rural families spent less for margarine, cheese, eggs, grease, and hogs' lard.

Among the cereal foods, flour and bread occupy first place in both groups, but the division between these two foodstuffs was different in the two cases. While purchases of bread were only 7.5 per cent of the bakery purchases among the agriculturists they rose to about 60 per cent among the city laborers. These figures show that the wives

of the agricultural workers generally made their bread while, perhaps because of a lack of ovens and other conveniences in urban dwellings, the high cost of fuel, and considerations of comfort, urban wives preferred to buy bread. Among the vegetable provisions potatoes were much more important in rural budgets than other vegetables and fruits.

The statistics of expenses, which are unfortunately partly defective because of the scarcity of points of comparison, are completed by the data in Table JJ [omitted here] on the quantities consumed of certain principal commodities calculated per family and per consumer-unit. From this table it appears that the total consumption of meat, salt herring, and milk was definitely greater in the country than in the cities; for cheese, eggs, and probably also margarine the reverse was true. While the country people used lard chiefly, the urban workers presented greater variation; and rural people consume nearly twice as much salt herring as urban families. A comparison shows that rural families use less milk, skimmed or unskimmed; this difference only partly compensates for the greater use of cheese that we have already mentioned. For all the important items of a vegetable nature, except grains, consumption is greater in the country. Rural families use twice as many potatoes, although the returns on this item cannot be considered as absolutely accurate. If one states the total amount of bread served on the table in terms of flour, consumption of this item is considerably greater in the country. Rye flour forms a larger proportion of total consumption in the country.

From the comparison that has just been made it appears that there are considerable differences between the family budgets when studied from the point of view of *total nutritive quantity* and of *nourishment value*. Comparing the average budgets one finds that the urban workers consume daily 2,645 (letter *b*) or 2,981 (letter *a*) pure calories per consumer-unit; the figure for the agricultural workers is 3,546, which is 34 and 19 per cent greater, respectively.[2] This definite difference seems to show that agricultural work requires a greater production of energy and consequently necessitates more nourishment than ordinary industrial work.

In order to determine the differences in the composition of the diet, the proportion of the most important articles used was computed, such as milk and cream, butter and margarine, lard, wheat and rye flour, bread, potatoes, and sugar. In the rural budget these items compose 91 per cent of the total and 82 per cent or 80 per cent (*b* and *a*) in the city budgets. These figures clearly demonstrate that the diet is more varied among urban workers than among rural families.

[2] If one substitutes the German scale of consumption for the American one used here, these percentages are 31 and 23 per cent, respectively, varying a little in the different groups of families.

189. John B. Phear: Standards of Living in a Village of Bengal, India *

The homestead platform is generally surrounded in an irregular manner by large trees, such as mango, pipal, and palms. In small clearings among these a few herbs and vegetables are grown for family use in the curry; and the whole area or compound, which belongs to the homestead, is marked off from its neighbors, generally, in some very obscure manner, by most rude metes and bounds, through very rarely a tolerably neat fence of some sort may be met with. . . . The ordinary agricultural village of Bengal is but a closely packed aggregate of such homesteads as that just described, differing from each other only in small particulars according to the means and occupations of their owners, and more or less concealed among the trees of their compounds. . . . Sometimes a fortunate or wealthy *ryot* (peasant) has a tank attached to his homestead all his own, to which his neighbors have no right to resort. . . . The family of a homestead, which may consist of a father and sons, or of brothers or cousins, usually cultivates from 2 to 10 acres on the whole, made up of several plots, which often lie at some distance from one another. . . . Small cultivators and the superfluous hands of a family will work spare times for hire on their neighbor's land, and in some villages, where the occupation of a caste, say the weavers' caste, has died a natural death, the members forced to earn their livelihood by manual labor, amongst other employments take to labor on the land for wages. . . . From one end to the other of the village the homestead presents scarcely any variation of particular, whether the occupant be a poor *ryot* or a comparatively wealthy *mahājon* or trader, and its furniture is pretty nearly as meager in the one case as in the other. . . . In Europe as men rise above the poorer classes in means, they apply their savings in the first instance to the increase of personal comfort, convenience, the better keeping of their houses and its incidents, the garden, etc. This appears not to be the case in Bengal to any great extent. Often the foreigner's eye can detect but little distinction between the homesteads and surroundings of the almost pauper peasant and those of the retired well-to-do tradesmen. The mode in which the possession of wealth is made apparent is ordinarily by the expenditure of money on family ceremonies, such as marriages, *shraddhas* (funeral obsequies) and the readings of national and religious epics, the Bhagbut, Rāmāyan, and so on. . . . The social respect which is everywhere commanded by the possession of wealth seems to be meted out in Bengal very

* Adapted from Sir John B. Phear, *The Aryan Village in India and Ceylon,* London, The Macmillan Co., 1880, pp. 11–16, 18–19, 20.

much according to the mode or degree of magnificence with which these semipublic family duties are performed, and thus it happens that even in the most out-of-the-way agricultural village, such small ostentation in this way as can be attained unto is the first aim of the petty capitalist in preference to any effort at improving the conditions of his daily life.

190. S. Gian Singh: Standards of Living in a Village of Punjab, India *

For the purpose of food consumption the inhabitants of the village may be didived into two classes: (i) the landowners, field laborers, tenants, and other castes who do hard bodily labor, and (ii) the trading and nonagricultural castes not included in (i). . . . The various castes included in class (i) are practically all vegetarians. Occasionally a man may be found who eats meat habitually, but there are few such. Those who can best afford meat, such as the *Jats,* do not want it unless they have acquired the taste by service in the army, and the others, such as the *chuhras* and *Arains,* who are glad enough to eat meat when they can get it, cannot as a rule afford it. The Hindu castes in group (ii) are all strict vegetarians. The sedentary nature of their occupations and the fact that as a rule they consume more milk and its products than the other castes reduce the amount of cereals and pulses which they consume. The *Jogi-Rawals* and *Khojas* being Moslems are more frequent meat-eaters than the others, and for this reason and also because they have no hard bodily work to do, their consumption of cereals is less than that of the persons in class (i).

The number of meals taken varies according to the season of the year from three to four a day. In the summer when the peasant has to go out very early to his plowing or sowing he starts without food and he does two or three hours' hard work before he breaks his fast. This happens at about 7 or 8 A. M., known as *lassi wela,* the time when the *lassi* (buttermilk) is brought out to him either by his wife or by some junior member of his family. With his *lassi* he takes also a small portion of solid food, usually a single *chapatti* (unleavened bread) smeared with *ghi* (clarified butter). Then he sets to work again till near midday (*roti wela*) when he has his first solid meal of *chapattis* and *ghi* washed down with water and perhaps buttermilk. At this time also he may eat a little *gur* or raw sugar, vegetables, and pickles, then to work again till the afternoon when if hungry he has another snack,

* Adapted from *An Economic Survey of Gaggar Bhana,* an inquiry conducted by S. Gian Singh, under the supervision of C. M. King, financial commissioner, Punjab, 1928, pp. 182, 183, 191, 192, 194, 195. Gaggar Bhana is a village in the Amritsar district of the Punjab.

possibly only a *chapatti* left over from *roti wela*. At sunset he goes home to his house and partakes of supper, the big meal of the day, when he takes a solid foundation of *chapattis* rendered palatable with pulse, boiled vegetables, and raw sugar and *gur*. This time also he has a drink of milk, and if he is a meat-eater he takes meat. Thus normally he has only two solid meals in the day. At harvest time and in the summer when there is plowing to be done, the number of meals is increased to four, including the early *lassi wela*. The afternoon snack is then expanded to a full meal, which is taken in the house or if time cannot be spared for the peasant to go home, as at harvesting, this meal is brought out to him by his womenfolk. When the cultivator goes home for his afternoon meal as he does when he is plowing he does not usually return to work in his field, but devotes the remaining hours of daylight to looking after his cattle, and chopping food for them.

For each of the classes mentioned in the first paragraph detailed observations have been made and the result of these observations is tabulated in the tables below.

As a rule, the only persons in this village who eat meat are Mohammedans. Occasionally, however, military pensioners or persons who are still serving in the army and are at home on leave also eat meat, either the flesh of goats or of fowls. The Mohammedan *Khojas* and *Jogi-Rawals* are regular consumers of meat, which they eat every third or fourth day. Sweepers also eat it very occasionally during the harvesting time. The Moslems eat the meat mixed with vegetables and rice, the quantity consumed being about 3 ounces (1½*chhattaks*) per diem per head of meat consumers all round. The average monthly consumption is 7 or 8 goats. The military pensioners and other Sikhs, who have acquired to some extent the meat-eating habit, between them do not probably consume more than 5 or 6 goats in the year. The total consumption for the village may be estimated between 90 and 100 goats in the year. The animals killed are usually under one year of age. Eight to ten months is said to be the age at which their meat is most palatable. The Moslem goat-keepers, however, will not let an animal die a natural death and have no compunction about slaughtering it if they see it is ill and not likely to recover. The village meat seller is a *Jogi-Rawal* who slaughters an animal every third or fourth day. The meat is sold at 8 annas a seer. The total number of cows in March, 1925, was 96 of which 52 were actually yielding milk. The total number of buffaloes was 196 of which 127 were actually yielding milk. Enquiries made show that the highest yield of milk per buffalo does not exceed 10 seers, while in some cases it is not even more than 8 seers.*

* A seer is a trifle more than two pounds. Forty seers equal $82^{2}/_{7}$ pounds or a maund.

WHEAT CONSUMPTION OF THE CULTIVATING CLASSES

MALES			FEMALES		
Age in Years	Total Number	Total Monthly Consumption in Maunds *	Age in Years	Total Number	Total Monthly Consumption in Maunds *
Less than 5	113	17.53	Less than 5	96	14.89
5–10	75	30.23	5–10	67	27.00
11–15	69	43.08	11–15	46	24.25
16–25	92	69.94	16–25	101	53.26
26–55	183	147.97	26–55	123	67.26
55 and over	51	28.69	55 and over	29	11.47
Total	583	337.44	Total	462	193.54
			Grand total	1,045	530.98

* A maund is equal to $87^2/_7$ pounds or 40 seers.

WHEAT CONSUMPTION OF THE NONCULTIVATING CLASSES

MALES			FEMALES		
Age in Years	Total Number	Total Monthly Consumption in Maunds	Age in Years	Total Number	Total Monthly Consumption in Maunds
Less than 5	70	10.87	Less than 5	66	10.24
5–10	57	22.98	5–10	44	17.74
11–15	51	26.89	11–15	32	15.16
16–25	85	52.31	16–25	82	43.24
26–55	120	84.40	26–55	93	49.04
55 and over	31	16.35	55 and over	19	7.51
Total	414	213.80	Total	336	142.93
			Grand total	750	356.73

The yield of milk from cows is 7 seers as a maximum and 6 seers for a cow not fully in milk. On the whole, the enquiries indicate that the buffaloes yield about 4 seers of milk per diem on the average and the cows 2½ to 3 seers. If we apply these figures to the total number of milch animals, we get a total milk supply from cows and buffaloes of 1,024 seers per diem, which comes to a little over half a seer per diem per head of population. During the period of the enquiry there were

98 nanny goats of which 40 were giving milk. Their average milk supply may be reckoned at half a seer per diem. This would add 48 seers daily to the milk supply of the village. Goats' milk produces very little *ghi*. It is either consumed as it is or else converted into *lassi* (buttermilk). Enquiries indicate that no milk is either imported into or exported from this village. The landowners consume milk, *lassi* (buttermilk), butter, curds (*dehi*), and *ghi* (clarified butter) and sometimes they sell a little *ghi*. The village menials, however, content themselves with the buttermilk and curds and sell most of the *ghi*, which is the product of milk. The milk supply appears to be most plentiful during the months of August and September, when most of the *Jogi-Rawals* have returned from their expeditions with money in their hands and are able to buy animals from itinerant dealers. These animals are subsequently sold at Amritsar at the *Diwali* fair before the *Jogi-Rawals* go out on fresh expeditions. . . . If there is scarcity the poorer inhabitants replace wheat with maize. They also probably have to sell their milch animals and consequently have less milk. At the first sign of scarcity, however, such of the people as are not able to make their living in the village leave it for work outside.

As far as is known very little change has taken place in the diet of the people during the past 15 years. In fact it might be said that they are probably eating now exactly what they did 15 or 16 years ago. There has been very little advancement in luxury in this respect.

GLOSSARY OF TERMS

Jats—One of the principal landowning agricultural tribes in the Punjab.
Chuhras—Sweeper caste; the lowest grade of Hindu society.
Arian—A Mohammedan agricultural tribe, found as market gardeners near cities.
Jogi-Rawals—A mendicant caste in the village.
Khojas—A Moslem trading caste.
Sikh—A religious sect.
Diwali—A Sikh and Hindu festival, characterized by illumination at night.

191. A. G. Ruston: Farm Business Studies in Switzerland and Denmark *

Realizing that if a national agricultural policy were to be obtained in Switzerland, it was no use going to the government or to the coun-

* Adapted from A. G. Ruston, "Agricultural Costings in Switzerland and Denmark," Great Britain *Journal of the Ministry of Agriculture and Fisheries*, Vol. XXXII, No. 4, pp. 312, 314, 315 (July, 1925); Vol. XXXII, No. 5, pp. 447–448, 449–450 (August, 1925).

try with generalities, Dr. Ernst Laur, the well-known economist and secretary of the *Union Paysans Suisses,* has been engaged since 1901 in patiently, laboriously, and systematically collecting and arranging statistical data taken from the carefully kept books of some four hundred farmers, whose accounts have been supervised through the Union. . . . The farms can be and are classified according to the different systems of farming adopted and according to the size of the holding, so that information is readily available as to how far the size of the holding is a factor influencing its efficiency; and as to the type of farm which at the present time is giving the best financial return. . . .

Swiss Results by Size of Farm

Size of Holding [in Acres]	Number of Holdings	Capital Invested per Acre			Output per Acre			Production Costs per Acre			Net Balance per Acre		
		£	s	d	£	s	d	£	s	d	£	s	d
7.5–12.5	662	149	18	8	22	11	7	18	15	1	3	16	6
12.5–25.0	2,457	116	16	2	19	0	3	14	5	6	4	14	9
25.0–37.0	1,367	108	8	5	17	17	2	12	8	11	5	8	3
37.0–75.0	1,247	96	11	10	16	2	3	11	1	1	5	1	2
75.0 and over	364	75	4	3	13	17	7	9	11	10	4	5	9

No one going over the average Swiss holding could fail to be struck with the size and equipment of the buildings, especially in comparison with the size of the farm. . . . While the figures available make it difficult to see how far this heavy expenditure on buildings and equipment is justified by results, some idea of the way in which the farms are being handicapped by having to carry so large a proportion of dead stock can be obtained from a study of one farm of about 35 acres, more than 30 of which were under grass.

Capital Invested on a Thirty-five Acre Swiss Farm

Investment	Total £	Per Acre			Per Cent
		£	s	d	
Land	1,692	48	0	0	34.0
Buildings	2,050	58	10	0	41.5
Implements and machinery	452	13	0	0	9.5
Live stock	650	14	10	0	10.0
Store and floating capital	250	7	0	0	5.0
Total	5,094	140	20	0	100.0

Similar work has been carried out in Denmark by Dr. Larsen since 1917, and the statistical data collected by him from the carefully kept accounts of more than 400 holdings of varying size have brought out the strong and weak points of the small-holding system in a remarkable manner. It is only after carefully studying trustworthy data of this description that one can finally decide how far we, in England, should be justified in following the example of the Danes and adopting a policy which involves the breaking up of the large estates. If such a policy is adopted, and the tendency certainly points that way, what size of holding is likely to give the best results for the nation as a whole and the individual farmer concerned? If a time comes when we must, as far as possible, be self-supporting as far as our food supply is concerned, it is undoubtedly the small holding which is wanted. Dr. Larsen's figures answer that point conclusively. [Here he shows that gross output per acre varies from £20 *s*1 for farms under 25 acres to £12 *s*4 for farms over 250 acres. He continues:] Is the time coming when we may lose our industrial supremacy, when the industries in the towns can no longer absorb our surplus population, and the question of employment of labor [will] be one of the planks upon which a national agricultural policy will be built? The figures of Dr. Larsen will show that it is the small holding which, unit for unit, is socially in this respect the best. [Here he shows that the small holdings employ 11.3 men per 100 acres on the average and the large only 5.4 men per 100 acres. He continues:]

The individual farmer, however, will want to look at the matter from the personal view; the economic side rather than the social aspect of the matter will appeal to him. He has entered the business of farming as a business man; with him farming is a means to livelihood; he wants to pay high wages for his men; he wants to give employment to as many men as possible, but he must make a living, and it is here on the economic side that the figures of Dr. Larsen are so

CAPITAL INVESTED PER ACRE IN DANISH FARMS, 1917–1923

SIZE OF HOLDINGS IN ACRES	LAND			BUILDINGS			WORKING CAPITAL			TOTAL CAPITAL		
	£	*s*	*d*	£	*s*	*d*	£	*s*	*d*	£	*s*	*d*
Less than 25	16	10	0	18	8	0	20	12	0	55	10	0
25–50	17	5	0	13	5	0	15	8	0	45	18	0
50–75	19	3	0	12	4	0	14	15	0	46	2	0
75–100	18	18	0	11	18	0	13	8	0	44	4	0
100–250	18	10	0	9	18	0	11	10	0	39	18	0
250 and over	19	8	0	10	2	0	10	7	0	39	17	0

instructive, for they certainly do not reveal so conclusively the fact that the small holding of approximately 20 acres, so common in Denmark, is the most economic unit. It is handicapped by high capitalization, particularly in the form of nonproductive capital, by high working costs, by the uneconomic employment of labor, both man and horse, to such an extent as almost, if not quite, to overbalance the social advantages it enjoys.

From the individual economic standpoint it is not so much the gross output that matters as the net; it is not the sales off the farm, its production or productivity, that stands out as preeminently important, but the margin between the production costs and prices realized on sale.

RESULTS OF DANISH FARMS, 1917–1923

SIZE OF HOLDINGS IN ACRES	CAPITAL INVESTED PER ACRE			OUTPUT PER ACRE			COST OF UPKEEP PER ACRE			NET BALANCE PER ACRE		
	£	*s*	*d*	£	*s*	*d*	£	*s*	*d*	£	*s*	*d*
Less than 25	55	10	0	20	1	0	17	10	0	2	11	0
25–50	45	18	0	15	4	0	11	16	0	3	8	0
50–75	46	2	0	15	3	0	11	10	0	3	13	0
75–100	44	4	0	13	18	0	10	4	0	3	14	0
100–250	39	18	0	12	8	0	9	5	0	3	3	0
250 and over	39	17	0	12	4	0	9	4	0	3	0	0

192. SHIROSHI NASU: JAPANESE FARMERS' CONDITION OF LIVING *

Income from agriculture.—We have already seen how high the population-supporting power of Japanese arable land is. The question that remains to be discussed in this section is whether or not such high population-supporting power is partly due to a sacrifice paid by the peasants in the form of a low standard of living.

In order to answer this question, let us first examine the expenses of agriculture and the nature of the outlay, so that we may look into the farmers' condition of living.

[Table 18] is a report on the farmers' household finances as the result of an investigation covering one year from September, 1926, to September, 1927, conducted by the Bureau of Statistics of the Japanese Government.

Among the total 670 farm families investigated, the average monthly income per family is hardly sufficient to cover the monthly expendi-

* Extract from Shiroshi Nasu, *Land Utilization in Japan*, Tokyo Imperial University, a part of the report of the Research Committee of the Japanese Council, Institute of Pacific Relations, October, 1929, pp. 196–204.

TABLE 18

AVERAGE MONTHLY INCOME PER FARMING HOUSEHOLD IN YEN

[CLASS OF FARMER]	NUMBER OF FAMILIES INVESTIGATED	ACTUAL MONTHLY INCOME IN YEN			
		Total	Pure Agriculture	Other Income	
				Labor	Other than Labor
	(1)	(2)	(3)	(4)	(5)
Total	670	96.16	61.57	11.03	23.56
			(10.56)*	(1.89)	(4.04)
Peasant proprietors	132	112.53	74.91	6.81	30.81
			(12.64)	(1.15)	(5.20)
Partial tenant	330	100.33	65.29	11.06	23.98
			(11.01)	(1.87)	(4.04)
Tenant	208	79.16	47.21	13.66	18.29
			(8.24)	(2.44)	(3.26)

[CLASS OF FARMER]	EXPENSES IN YEN	SHORTAGE OF AGRICULTURAL INCOME TO MEET EXPENSES (6)—(3)	SHORTAGE OF INCOME FROM AGRICULTURE AND LABOR TO MEET EXPENDITURES (6)—[(3)+(4)]	RELATION OF ALL INCOME TO EXPENSES (6)—[(3)+(4)+(5)]
	(6)	(7)	(8)	(9)
Total	96.39	34.82	23.79	— 0.24
	(16.54)	(5.98)	(4.08)	—(.004)
Peasant proprietors	109.66	34.75	27.94	+ 2.87
	(18.50)	(5.86)	(4.71)	+(0.48)
Partial tenant	100.63	35.34	24.28	— 0.30
	(16.98)	(5.96)	(4.10)	—(0.05)
Tenant	81.26	34.05	20.39	— 2.10
	(14.49)	(6.07)	(3.64)	—(0.38)

* Figures in parentheses indicate the income and the expense per capita.

ture. In the calculation of the income from agriculture, the average deficit is 34.82 yen per month, so that the average farmer has to rely to a very large extent upon other incomes than those derived from farming for the financial needs of his household.

In the general average classified as peasant proprietor, partial tenants (who are both owners and tenants), and tenant-farmers, the peasant proprietor alone can count upon a surplus of 2.87 yen per month, while the farmers of the other two classes are unable to make ends

meet. The lot of a tenant-farmer is most miserable, for he must meet a monthly deficit of 2.10 yen on an average. Furthermore, according to the investigation made by the Bureau of Statistics, the average partial tenant as well as the tenant-farmer can count upon a surplus only when the area of farm under his management is larger than 1.8 cho. The very fact that by far the largest number of Japanese farmers till an area of less than one cho is clear evidence of the difficulty of Japanese agriculture as a business.

According to the investigation made by the Ministry of Agriculture and Forestry of farmers who till on an average 1.7 cho per family, the average financial position was as follows [Table 19]. The period taken was from February, 1926, to January, 1927, and these farmers represented something better than the average in their respective classes.

TABLE 19

AVERAGE ANNUAL INCOME OF JAPANESE FARMERS IN YEN

[Class of Farmer]	Number of Families Investigated	Income			Outlay Other Than Household Expenditures			Number of Families Investigated	Net Income	Net Income from Agriculture	Household Expenditure
		Agriculture	Other	Total	Agriculture	Other	Total				
Peasant proprietor ...	121	2,473	523	2,996	1,298	100	1,398	121	1,597	1,174	1,383
Partial tenant	56	2,433	351	2,784	1,359	38	1,397	56	1,387	1,074	1,133
Tenant	125	1,915	305	2,220	1,211	21	1,232	125	987	703	928

An analysis of the above table shows . . . [that] in the case of the average peasant proprietor, or partial tenant or tenant-farmer, his net income is not sufficient to cover his household expenditure, when the calculation of his income relates to his agricultural business alone. As to other income in addition to that from agriculture, the peasant proprietor's from his real estates and the tenant-farmer's from his labor is comparatively large, showing the wide gap between a wealthy and a poor farmer.

The fact that an average peasant in Japan cannot make ends meet by agriculture alone can be understood by the fact that out of the total number of Japanese farming families, approximately 30 per cent are engaged in other business as well [Table 20].

TABLE 20

FARMING FAMILIES WHICH ARE ENGAGED IN OTHER BUSINESS AS WELL

YEAR	TOTAL NUMBER OF FARMING FAMILIES	THOSE ENGAGED IN AGRICULTURE ALONE	THOSE ENGAGED IN OTHER BUSINESS AS WELL
1917	5,466,301	3,796,997	1,669,364 (30.54%)
1927	5,561,608	3,921,436	1,640,172 (29.49%)

Under such difficult financial circumstances, Japanese farmers are inevitably suffering from heavy debts, as may be seen from the following tables made by the Ministry of Agriculture and Forestry (1927).

TABLE 21

THE DEBTS OF FARMING FAMILIES *

[CLASS OF FARMER]	NUMBER OF FAMILIES INVESTIGATED	[AMOUNT OF DEBTS IN YEN]		
		At the Beginning of the Fiscal Year	At the End of the Fiscal Year	Increase or Decrease
Peasant proprietors	121	858.9	827.9	— 31.0
Partial tenant	56	1,037.3	1,153.5	+116.2
Tenant	125	445.1	519.8	+ 74.7

* These figures include total debt on agriculture and other accounts.

With the one exception of peasant proprietors whose debts are decreasing, the Japanese farmers are suffering from increasing debts, which at present make up an enormous grand total [Table 21]. To make the situation still worse, a large portion of these debts has been contracted not for productive purposes but to meet the household expenditures.

A comparative investigation of farmers' household expenditure.— In order to examine further the Japanese farmer's household finance, let us refer to the result of an investigation made by the Ministry of Agriculture and Forestry into the contents of household expenditure of farming families.

[Table 22] also clearly shows a great difference between the average peasant proprietor and the average tenant-farmer in their respective household expenditures, especially in No. 2 cost of living, which includes "schooling" and "culture." The latter peasant can afford to expend less than 13 yen average per annum for these two items. From

TABLE 22

ANALYSIS OF ANNUAL EXPENDITURE OF FARMING FAMILIES IN YEN

	PEASANT PROPRIETOR	PARTIAL TENANT	TENANT
Number of family members	7.2	7.4	6.7
Household expenditure	1,385.1	1,132.1	928.8
a. Payment in cash	824.0	620.0	486.0
b. Payment *in natura*	530.2	493.5	430.2
No. 1 Cost of Living			
Housing	50.8	30.2	26.3
Food	3,530.3	591.1	472.0
	(96.3)*	(93.3)	(103.8)
Clothing	143.5	109.3	84.1
	(138.7)	(105.6)	(80.3)
Lighting and heating	77.2	66.8	59.6
	(30.4)	(25.8)	(15.7)
Tools	35.3	27.7	19.1
Total	837.1	753.1	661.1
No. 2 Cost of Living			
Culture	10.1	8.3	4.2
Education	44.3	33.9	8.6
Social	107.6	76.7	58.8
	(88.5)	(67.5)	(46.2)
Sundry charges	52.1	31.7	16.1
Luxuries	51.9	36.7	41.3
Diversion	14.2	8.4	6.4
Health	64.1	46.5	37.8
Ceremonial	116.3	48.0	48.7
Miscellaneous	80.9	81.5	42.8
Total	541.5	371.7	264.7

* Figures in parentheses indicate payment in cash.

such a comparison of household expenditures one can see in what condition the children of a poor peasant are found.

The tenant-farmer expends comparatively little in his household finance as far as cash payment is concerned, but in his table expenses the cash payment represents nearly one-quarter, which is larger in proportion than the average peasant proprietor's.

This is due to the fact that the tenant always gives a very large portion of his rice crop to the landlord in lieu of farm rent, instead of

using such rice for his table, a feature indicative of the peculiar condition of a tenant-farmer's mode of living.

Let us further compare the average Japanese farmer's conditions of living with those of the American. Dr. K. Takaoka, using the investigations which are made by the Japanese Ministry of Agriculture and Forestry and the American Department of Agriculture (the method of compiling statistics is different—the former uses calculations by means of bookkeeping, while the latter adopts a questionnaire system) gives the comparative figures as follows:

The average annual cost of living in the case of an American farmer is $1,597.50 acording to the result of investigation of 2,886 farm households in 1922–1924.* At the then current rate of exchange, this would be 3,807.29 yen. . . . As compared with the average cost of living of a Japanese farmer, namely, 1,044.41 yen, this is 364.4 per cent.

TABLE 23

A Comparison of the Costs of Living of Japanese and American Farmers

Kind of Expense	Actual Outlay per Farm Family		Percentages	
	Japanese [in Yen]	American [in Dollars]	Japanese	American
Food	479.214	658.80	45.9	41.2
Clothing	102.663	234.90	9.8	14.7
Housing	29.895	199.60	2.8	12.5
Cultural	38.298	104.80	3.6	6.6
Miscellaneous	392.015	399.40	37.6	25.0
Total	1,042.085	1,597.50	100.0	100.0

As the average number of members of an American farmer's family is 4.4, the per capita cost of living would be 862.71 yen in our currency. As compared with this, the average number of members of a Japanese farmer's family is 7, according to the investigation made in 1923 (6.72 in 1924), the average per capita cost of living of a Japanese farmer in 1923 would be 146.78 yen and that for 1924, 173.78 yen—the average of both being only 160.32 yen, which represents only 18.58 per cent of the American average, showing how much lower the standard of living of a Japanese farmer is than that of an American farmer. Dr. Takaoka has made further investigation into the details of the cost of living, comparing the Japanese farmer's with the American's [Table 23]. . . . Dr. K. Takaoka's opinion is as follows:

* Editors' Note.—This probably refers to Ellis L. Kirkpatrick's studies.

The difference between the expense for food is especially noticeable: the percentage of the Japanese farmer's is 45.9 against which that of the American farmer's is only 41.2. According to the well-known Engel's law, the lower the standard of living is the larger will be the expense for food as compared with other items of expenditure. In the items of the American farmer's expenditure, the housing, the clothing, and the cultural expenses are all much larger than the Japanese farmer's. In the housing, especially, the American farmer's is 4.3 times as much as the Japanese; in the cultural, the American farmer's is 1.8 times as large as the Japanese farmer's. In miscellaneous items, the American farmer's average percentage is 25 against 37.6 per cent of the Japanese farmer's. This last item includes various expenses, like lighting, heating, and furniture: the last-mentioned two items represent 5.3 per cent and 2.5 per cent, respectively, in the case of the American farmer, against which the Japanese percentage is 5.2 and 2.7, respectively, there being very little difference between the two. The differences are, however, very large in such items as presents given to relatives and friends, included in "personal"; the American percentage is only 2.6 as against the Japanese 6.7, to say nothing of "ceremonial," which occupies 6.3 per cent for the Japanese farmer, an evidence of room for some improvement in the mode of living of Japanese farmers.

Thus the actual Japanese farmers' living conditions have been described from the results of Dr. Takaoka's elaborate and valuable investigation. In this connection, however, I would add my own observation that the Japanese farmers have to spend a large portion of their small income for "ceremonial," which includes present-giving, feast-making in connection of the attainment of manhood, marriage, funeral, etc. This is a time-honored custom consistently followed by farmers, and signifies plenty of pleasure, consolation, and fellowship. In this sense, Japanese farmers are fitly described as still strongly characterized by feudal traits.

Let us next compare the farmer's conditions of living with those of other kinds of laborers and salaried men. The following table shows the per capita cost of living, according to the investigation made by the Bureau of Statistics.

The average monthly cost of living of a farmer is only 16.53 yen and is thus the lowest of the three. The average farmer generally lives upon material supplied by himself for the most part, but such material is sometimes of poor quality and very cheap. In the calculation of [Table 24] such material is included. He produces rice, for instance, but he never lives upon the better kind of rice, which he invariably sells, and himself is contented with the worst that remains after the sale has been made at the best price he can obtain. According to my estimate, the calculation in the above table, which was taken from the current market, may be too high. The monthly cost of living of an average Japanese farmer may be even lower than 16.53 yen per capita. Another fact worth noticing is the very low standard of living shown

TABLE 24

AVERAGE MONTHLY COST OF LIVING PER CAPITA IN YEN

[KIND OF EXPENSE]	FARMER		INDUSTRIAL LABORERS		SALARIED MEN	
No. 1 Cost of Living						
Food	7.54		8.75		10.06	
Housing	3.52		4.12		6.52	
Clothing	1.30		2.07		3.05	
Total	12.36	(74.77)*	14.94	(74.32)	19.63	(70.04)
No. 2 Cost of Living						
Health	0.46		1.34		1.74	
Amusements and culture	0.37		0.76		1.37	
Education	0.23		0.67		1.25	
Social	1.30		1.05		1.62	
Sundry charges	0.22		1.10		0.37	
Picnics and trips	0.10		0.14		0.32	
Stationery, correspondence, transportation, and traffic	0.25		0.35		0.72	
Other	1.21		0.71		0.96	
Total	4.17	(25.23)	5.17	(25.68)	8.41	(29.96)
Grand total	16.53	(100.00)	20.11	(100.00)	28.04	(100.00)

* Figures in parentheses indicate percentages.

by the figures regarding "health and hygiene," "diversion and culture," and education. The comparison of "No. 2 cost of living" thus indicates that of the farmer as the lowest of the three, being only 25.23 per cent, against the industrial laborer's 25.68 per cent and the salaried man's 29.96 per cent.

What has been said so far is sufficient to prove the low standard of living of the Japanese farmers and the principal reason is that the rate of profit from their business is so low. The largest portion of Japan's farming population consists of small farmers, whose agricultural product is not large enough to pay the cost of production, including the farm rent. Even as a pure laborer, such peasants must find it very difficult to make both ends meet from their income alone. Under such circumstances the agricultural industry in Japan is being continued, and it is no wonder that the lowering of the land rent as well as the raising of the price of rice are two central questions in her rural economics.

CHAPTER XXII

RURAL-URBAN MIGRATIONS

Rural-urban migrations represent one of the most important relationships between the city and country. Demographically, migrations of this type are one of the most important forms of social metabolism of populations. Culturally, they represent the infusion of the culture of the country into the city and vice versa. Economically, they constitute one of the major forms of cooperation and division of labor between town and country. For these reasons and many others the rural-urban migrations warrant most careful study. In the following pages we attempt to discuss this problem in all its important aspects.

A. TRENDS AND CAUSES OF MIGRATION

I. ATTITUDES TOWARDS MIGRATION

Attitudes towards migration to towns and cities have always been of two types; one assumes that migration is dangerous to a country and suggests methods to keep the farmer-peasants on the land; the other assumes that migration is valuable for a country and helps to promote efforts to leave the farm. Those who have been opposed to migration, especially rural depopulation, have suggested a number of measures, which have varied according to the political organization of the country, to prevent the march to the cities. The Roman emperors at the time of the decay of the Roman Empire in the West formulated a legal measure known as *adscriptus glebae,* which bound the peasants to the soil.[1] Similarly, the reforms of the Tokugawas in Japan bound the rural classes to their farmsteads.[2] The recent reforms of Mus-

[1] For the famous measures of Augustus see Roth Clausing, *The Roman Colonate, the Theories of Its Origin,* Columbia University Studies in History, Economics, and Public Law, Vol. CXVII (1925).

[2] See especially Kanichi Asakawa, "Notes on Village Government in Japan," *Journal of the American Oriental Society,* Vols. XXX (1910) and XXXI (1911).

solini in Italy are not materially different. Other reforms suggested by the opponents of excessive urbanization include:[3]

The improvement of education, with the preservation of tradition, habits, and wholesome amusements; encouraging farm-hands to purchase land; granting capital and cheap credits to cooperative societies or similar organizations for the promotion of agricultural production; development of agricultural instruction for boys and girls in the practical sense; increase of methods of rationalization for farms and households; development of home industry; development and improvement of country roads, water pipes, and electricity; development of the telephone system and broadcasting and the encouraging of agricultural organizations looking after the welfare of country people.

Those who have favored migration to the cities have done so primarily because of their belief in the economic theory that the greatest social income is achieved by the best combination of capital and labor in all branches of industry of a country. These form the laissez faire school; they feel that the natural workings of economic law will create the greatest economic prosperity in a country.[4] Others think that the rural environment is not sufficiently stimulating for the proper development of the personality of rural people and that any country is benefited when as large a proportion of the population as possible has close contact with the enlightening influences of the city.[5] The chief method advocated by some to bring about a proper amount of migration to the cities is one of laissez faire: "Economic forces will level out the differences." Others have advocated the introduction of industry into the country, governmental purchase and reforestation of marginal lands, and other public measures.

[3] Resolution passed by the Congress of the International Parliamentary Economic Union at its 1929 meeting in Berlin. See the *Minneapolis Journal,* September 27, 1929, p. 18; the readings by Laur, Hainisch, and others; Émile Usquin, *La dépopulation des campagnes,* Paris, 1910; and Jules Ferlet, *L'abaissement de la natalité à Rome et la dépopulation des campagnes: les réformes d'Auguste,* Paris, 1920, chaps. iii and iv.

[4] See the works of all the neoclassical economists in the United States. See especially Henry C. Taylor, in the Proceedings of the Conference on Rural Family Relations, Merril-Palmer School, Detroit, 1929, pp. 24 ff.; an analysis of the combinations of labor and capital in John D. Black, *Introduction to Production Economics,* New York, 1926; and Leon E. Truesdell, *Farm Population of the United States,* Washington, 1926, introduction.

[5] See Edward A. Ross, *The Social Trend,* New York, 1922, pp. 43–49; Macy Campbell, *Rural Life at the Crossroads,* New York, 1927, chap. i; the implications of John G. Thompson, in his work *Urbanization, Its Effects on Government and Society,* New York, 1927; Thomas N. Carver, "Rural Depopulation," *Journal of Farm Economics,* Vol. IX, No. 1; and the reading from Paul M. Meuriot following.

To answer these questions and many others it is necessary to study more fully the subject of migration itself. Consequently this chapter and the succeeding ones include a discussion of the rural-urban interchange of population—the mechanisms of interchange, the quantitative aspects, and the qualitative or social effects. What are the forces that select populations for cities? Are the rates for urbanization increasing or decreasing? Are cities of the present era, as compared with previous decades, more dependent upon internal growth than upon migrations? What sort of person migrates? How is he characterized as to sex, age, mental and moral propensities, and how is he equipped physically or biologically? What happens in the city? Is he successful? What rank—upper, lower, or middle—does he enter? To what extent may rural-urban social differences and relationships be explained by this interchange of population? All these questions must be answered in order to understand this problem of migration and the larger problem of rural-urban relationships.

II. COMPARATIVE RÔLES OF MIGRATION AND NATURAL INCREASE IN THE GROWTH OF CITY POPULATIONS

The last epoch during which a rapid growth of cities took place is the period from the late middle and early modern ages until the present. The number of cities in Europe with populations above 100,000 was 23 in 1800; 47 in 1850; 146 in 1900; and 202 in 1920. There was a similar growth throughout the civilized world in smaller cities. The urban world increased while the rural world decreased; the nonagricultural populations increased, at least comparatively, while the agricultural populations decreased.[6]

What are the causes of the increase of the urban population? Is the number of births in the cities much higher than the number of deaths? Or is the increase caused by the migration of country people to the city? Or are both factors responsible for the growth of the urban world? If so, what are the recent trends in the relative significance of the excess of births over deaths and of migrations as factors in the growth or maintenance of the city populations? The theories in this field differ greatly. There is an

[6] See Henri Bunle, "Superficie et population des contrées de la terre vers 1920," *Bulletin de l'Institut international de statistique*, Vol. XXI, 1927. See other data in Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology*, New York, 1929, chap. xxiii, pp. 612–613.

optimistic theory outlined by Adna F. Weber and Robert R. Kuczynski (in his earlier writings) and a pessimistic one by Georg Hansen, Kuczynski (in his later writings), and Corrado Gini in some of his writings. The essence of these two conflicting theories follows:

Weber and Kuczynski argued that the importance of migrations as a factor in the growth and maintenance of cities was declining.[7] They claimed (before 1900) that the cities were no longer mere consumers of country populations, but were maintaining themselves and showing signs of increasing vitality. They predicted that within a few generations the cities would acquire naturally all the population they needed and would no longer depend upon migration from the country. They believed that in Europe the peak of migration to the cities was reached about 1850. These men wrote in the nineteenth century, when city vital indices were high because of the rapid migration of young adults to the small cities (small, that is, in comparison to our large modern cities), and because of the improvements in urban health achieved by the spread of the knowledge of hygiene. Artificial control of the birth rate was not yet common. Since the migrants to the cities had large families before they adopted urban standards of birth control, the vitality of the city populations was unusually high.

The writers having the pessimistic viewpoint wrote in an earlier period as, for example, Hansen, or in a later one, as Kuczynski in his later work, or else, as in the case of Gini, they had a more profound knowledge of standardized statistics and a historical background of biological and social factors in population growth.[8] Hansen based his catastrophic conclusion that cities would disappear if they were not supported by rural migrants upon statistics collected before health conditions were improved and when deaths generally exceeded births in European cities. This excess of deaths over births led Hansen to believe that cities grow or maintain a biological balance only through migrations

[7] Adna F. Weber, *The Growth of Cities in the Nineteenth Century: A Study in Statistics,* New York, 1899, pp. 243 ff.; Robert R. Kuczynski, *Der Zug nach der Stadt,* Stuttgart, 1897.

[8] See Georg Hansen, *Die drei Bevölkerungsstufen,* Munich, 1889; Corrado Gini, *I fattori demografici dell'evoluzione delle nazioni,* Turin, 1912; Robert R. Kuczynski, *The Balance of Births and Deaths,* New York, 1928; Pitirim A. Sorokin, *Contemporary Sociological Theories,* New York, 1928, pp. 245 ff., 422 ff.

from rural districts. If migration decreased, then the cities were doomed to decrease. If migration stopped, cities would disappear within a few generations.

Excessive urbanization of a country leads to a decline of the rural population, and the country can no longer support the city population by supplying a sufficient number of migrants. When deaths exceed births in the cities or when for each pair of parents there are not at least two offspring who, in turn leave at least two descendants, the biological balance is destroyed and the population of a country begins to decline. The early stages of urbanization are the blooming ones in a society, and the later stages are marked by the death of the bloom and the decline of the country, according to Hansen's rather extreme pessimistic theory. Gini's theory, developed twenty-three years later, was not so pessimistic, but it also maintained that urbanization had a depressing effect upon the natural increase of a society. Kuczynski found in 1929 that the urbanized sections of northern and western Europe produced only ninety-three future mothers per 100 living (mothers' data for 1926). Furthermore, he found that fertility rates decreased even more in 1927.

Which of these theories is more valid? Weber and Kuczynski claimed that the maintenance or growth of the city population depends more upon the excess of births over deaths in the cities than upon migration from the rural districts, and that the natural increase of the city grows with the passage of time. Hansen believed that cities cannot maintain the biological status of their populations without migrants from rural districts. The subsequent readings and references seek to evaluate the relative significance of natural increase and of migration as factors in the maintenance and growth of the urban population.

Trends in crude vital indices in various countries (ratio of births to deaths) are not discussed here, because changes that are taking place in the age distributions of the populations tend to increase the urban vital index at the expense of that of the rural districts and in consequence give the urban districts a fictitious superiority over the rural. The average age of the populations in the urbanized countries is increasing. The proportions of children are declining significantly while the proportions of adults are increasing. This decreases the number of deaths, be-

cause children die more often per 1,000 than middle-aged adults, and increases the number of births, because births are affected by the number of women of child-bearing age in a society, with the result that a fictitious vital index is established, which is not comparable with earlier periods.[9]

An analysis of other important data suggests the following conclusions.[10] (1) The theory of Hansen is inadequate, at least as far as the second half of the nineteenth century is concerned. Contrary to his statement, the city population on the whole compensates for its deaths by births and in this way keeps the biological balance at least stationary. (2) Still less adequate is the contention of Weber and Kuczynski that the maintenance and growth of urban populations would depend more and more upon natural increase and less and less upon migration. The data show no such trend; on the contrary, since approximately the end of the nineteenth century the rates of the natural increase of the city population (excess of births over deaths) have tended to decline and have declined so much that at present the city population is either failing to reproduce itself or barely maintaining its biological balance. When we consider that the crude rates of natural increase of the city population are considerably lower when standardized and that the city birth rate includes also the birth rate of the rural migrants with a fertility usually higher than that of the pure urbanites of two or more generations, then we must con-

[9] See S. de Jastrzebski, "Changes in Sex and Age Constitutions of Some Representative European Populations," *Journal of the Royal Statistical Society,* XCI, 240 (1928).

[10] For proof of these statements see *Statistisk Årsbok för Stockholms Stad,* 1914, p. 80; *Statistisk Årsbok för Sverige,* 1925, p. 41; *Statistisk Aarbog* (for Denmark), 1926, p. 22; Pascal K. Whelpton, "Industrial Development and Population Growth," *Social Forces,* Vol. VI, Nos. 3 and 4 (March and June, 1928), and "Population of the United States, 1925 to 1975," *American Journal of Sociology,* XXXIV, 265 (September, 1928); Charles J. Galpin, *Agricultural Situation,* United States Department of Agriculture, April 1, 1930, pp. 6–9; Hornell N. Hart, *Selective Migration as a Factor in Child Welfare in the United States, with Special Reference to Iowa,* University of Iowa Studies in Child Welfare, Vol. I, No. 7, p. 25 (1921); Louis I. Dublin, "The Statistician and the Population Problem," *Journal of the American Statistical Association,* XX, 9 (March, 1925); *Statistisches Jahrbuch der Schweiz,* 1925, p. 38; *Statistisches Jahrbuch der Stadt Berlin,* 1914, pp. 101, 104, 214; *Statistisches Jahrbuch für das Deutsche Reich,* 1923 and 1926; Gustav Elfert, "Stand und Bewegung der Bevölkerung," *Statistisches Jahrbuch deutscher Städte,* 1927, pp. 338 ff.; *Annuaire statistique de la ville de Paris,* 1921–1922, p. 26, and later volumes; recent volumes of *London Statistics* (data for London, especially on births, are not very reliable before 1880); Sorokin and Zimmerman, *op. cit.,* pp. 526–532; John M. Gillette, *Rural Sociology,* revised ed., New York, 1928, pp. 92 ff.; Michel Augé-Laribé, *L'évolution de la France agricole,* Paris, 1912, chap. iv; Paul M. Meuriot, *Des agglomérations urbaines dans l'Europe contemporaine,* Paris, 1898, chap. xiii.

clude that the rates of natural increase of the cities would have been still lower had only the pure urbanites of two or more generations been included in the computation; it is rather certain that at present the pure urban population is not replacing itself. (3) The growth of the urban population has been principally due to the migration of the rural population to the cities. (4) The rôle of this migration in the growth or maintenance of the city population, as compared with the rôle of the natural growth of the city population, has been increasing rather than decreasing. (5) The future growth of the cities would be possible only through a continuation of the migration from the rural districts or agricultural countries. (6) If the natural increase of the rural sections drops to the level of the present urban rate, then there will be no surplus for the city population. In this case either the growth of the cities will cease, or, if migration from rural districts continues, it will lead to a depopulation of the country, and sooner or later this will result in a decline in the city population. (7) Urbanization has been, and still is, a continual process rather than a static condition in a society. There is a constant population movement from the country to the city and, in a less degree, from the city to the country and from one city to another. This is true even of cities where the population is constant. There is no significant permanent population that has been urban for many generations. Part of the urban population dies out within a few generations; it is constantly being replaced by migrants from the country; another part migrates from the city to the country; a third part moves from city to city until it dies out or shifts to the country; the remainder (those who have been urbanites for many generations) forms a comparatively small proportion of the total population of a city.[11]

III. CAUSES OF MIGRATION FROM THE COUNTRY TO THE CITY AND THE GROWTH OF CITIES

The three major causes for this migration to the cities are a series of demographic factors, a group of economic conditions, and a number of inventions that have accompanied the develop-

[11] See Kuczynski, *op. cit.*, p. 54, and Johannes Wernicke, *Das Verhältnis zwischen Geborenen und Gestorbenen in historischer Entwickelung und für die Gegenwart in Stadt und Land*, Jena, 1899, pp. 87 ff. and *passim*. Hans Allendorf, *Der Zuzug in die Städte*, Jena, 1901, chap. iii, gives a summary of the theories concerning this question held by Hansen, Ammon, Hasse, Kuczynski, Bleicher, Boeckh, and Ballod.

ment of modern science.[12] In most of the analyses of migrations the economic factors are examined first. Except under unusual and catastrophic conditions the ratio of births to deaths is the fundamental factor in the relationship of any population to its natural resources. We know that in human affairs a large number of causes work together and that any social condition is the net result of a number of causes. Nevertheless, it must be stressed that the fundamental factor in migrations is this excess of births over deaths, and that the continued growth of population and cities depends largely upon such an excess somewhere in the rural districts.[13] There are other important factors emphasized in the readings.

A special argument must be mentioned here. There is a prevalent belief that the oppressive domination of the farm family by the father is a factor of great significance in the desertion of the farms and in the migration to the cities. In spite of the popularity of this theory we believe that it is erroneous and that it has been given more credence than it deserves, as we will attempt to prove.

The excessive domination of rural families by the father as a factor in migration to cities.—One of the current explanations of migration to cities is that the lives of farm women and children are repressed by the domination of the head of the family. Since

[12] See Sorokin and Zimmerman, *op. cit.*, pp. 533 ff.

[13] Regarding the significance of these three basic causes of migration to cities, see the readings of Sombart and the studies by Laur, Nater, and König; Meuriot; and Hainisch. See also E. W. Shanahan, "Economic Factors in the Changing Distribution of Population between Urban Centres and Rural Areas," *Economic Journal,* XXXVII, 395–403 (September, 1927); Wilson Gee and John J. Corson III, *Rural Depopulation in Certain Tidewater and Piedmont Areas of Virginia,* University of Virginia Institute for Research in the Social Sciences, Monograph No. 3, 1929, chap. iii. Gee and Corson established a high and significant rank order correlation of +.93 between the number of children in farm families and the percentage migrating to cities. See also William Ogle, "The Alleged Depopulation of the Rural Districts of England," *Journal of the Royal Statistical Society,* LII, 212 ff. (June, 1889); M. le Vicomte Rorric de Beaucaire, "The Migration from the Rural Districts and the Condition of the Agricultural Population in Germany," *Journal of the Royal Statistical Society,* XLIX, 450–452 (June, 1886) (an article translated from the *Bulletin du Ministère de l'Agriculture de France,* February, 1886); Augé-Laribé, *op. cit.*, chap. iv; Jean Guillou, *Étude d'économie rurale et sociale: L'émigration des campagnes vers les villes et ses conséquences économiques et sociales,* Paris, 1905, Part II. It should be mentioned here that Émile Usquin, in *La dépopulation des campagnes,* and various other writers attempt to base the demographic factor for France upon a legal-economic measure. They ascribe the low birth rate among French peasants largely to the excessive subdivision of land required by the abolition of the right of the testator in the inheritance of property in the Napoleonic Code of 1804. See also Georges Blondel, *Études sur les populations rurales de l'Allemagne et la crise agraire,* Paris, 1897, Part I, chap. i; Part II, chap. i.

the women are deterred from leaving the farm by the fact that custom forbids divorce and by the difficulty of securing a living elsewhere in the country, they must stay on the farm and continue to lead unhappy lives. Adult children, however, are not so bound, and they escape this parental domination by migrating to towns and cities.

This theory has arisen principally from two sources. First, there are a number of agricultural leaders who assert that a youth leaves the farm because his parents refuse to take him on as partner in the farm enterprise, treating him as an object to be exploited. Secondly, a number of social workers interested in the plight of women and children on the farm insist that one of the reforms needed in the rural family is a fairer relationship between husband and wife and between parents and children. In the minds of these two groups this is the solution of the agrarian problem, because it will tend to keep the boy or girl on the farm.[14]

Is it true that the excessive domination by the father is the chief factor in leaving the farm, or in migration to cities? Are the women and children on the farm so repressed by their subordinate rôle in the family that their personalities are blighted? In the chapter on the family certain data on this topic were given. For the purpose of analysis it was assumed that in five fundamental aspects of family relationships the relative positions of wife

[14] See the Proceedings of the Ninth Conference of the American Country Life Association, 1926, p. 113. "Mr. Felton: There was a feeling in the religious education group that there was a great lack of religious cooperation [between fathers and children]. The adults had been operating and left the first two letters in that word to the youth and the feeling was each group had tried to convert the other. Then we asked for definite suggestions by which this cooperation was being worked out. Here are some of them. (1) Church boards nowadays are putting at least one or more young people on their official board to represent the youth. (2) Give young people a chance to discuss and vote in what is known as the annual meeting and the like. (3) Give young people a responsibility in worship. Instances were given of young people conducting the work." Several other suggestions follow. The statement above indicates the general feeling of antagonism between the parents and the children on the farm. See also Carl Taylor's statement in the same volume, p. 102; G. H. Montgomery's statement, p. 100; the contrary statement by Ellis L. Kirkpatrick, pp. 72 ff.; and Kirkpatrick's statement, p. 70. Gabriel Davidson says on p. 68 that the question of economic freedom leads to antagonism between parents and children; Pittman takes the opposite view (see p. 66). See Carl C. Taylor, *Rural Sociology: A Study of Rural Problems,* New York, 1926, pp. 196 and 199, for both views. For an account of discontent among farm women see John M. Gillette, *Rural Sociology,* pp. 350 ff.; Mabel Carney, *Country Life and the County School . . . ,* Chicago, 1912, pp. 22, 25, 29 ff.; and William A. McKeever, *Farm Boys and Girls,* New York, 1917, pp. 62 ff. and *passim.*

and husband in rural and urban families are revealed. These were, respectively, the presence or lack of monogamy in the two families; equality of rights with regard to marriage dissolution; right of the bride or groom in the choice of a mate; relative rights of the wife or the husband in the ownership and disposal of the family property; and, finally, the position of the women in regard to suffrage and political participation, such as office holding, and so on. It was assumed that any essential difference in the organization of the rural and urban family would be reflected in one or more of these fundamental rights. What did the analysis show? [15]

It tended to show that, when due consideration is given to individual variations, there are no good reasons for thinking the position of the wife in the rural family one of more subjection than that of the urban wife. Rather, the study tends to show that the apparently greater subjection of the wife in the family simply meant more mutual dependence of husband and wife and, as a result, more subordination and domination within the family, without particular reference to the position of the woman. By the same logic as is employed by those who believe that the wife is repressed in the rural family, it is possible to prove also that the husband is more repressed in the rural family. Any closely knit organization, such as an army in time of war or a family on an isolated farm trying to feed, clothe, and support a large number on a limited income, is obliged to adopt more orderly methods than an army in time of peace or a small loosely organized family in a city, where individuals may have many services performed for them at other places when the family cannot perform them satisfactorily.[16] Not only is the wife in the rural family more subordinate to the husband, but the husband is more responsible to the wife, the parents to the children, the children to the parents, and the children to each other. It appears that some students of the rural family have confused close relationship with repression.

The greater freedom in the relationships of the members of urban families is merely a loose form of social organization, and

[15] See Sorokin and Zimmerman, *op. cit.*, pp. 353 ff.

[16] See Hildegarde Kneeland, "Is the Modern Housewife a Lady of Leisure?" *Survey Graphic*, LXII, 301 (June 1, 1929), and also her articles in the Yearbooks of the United States Department of Agriculture, 1927, pp. 380–381, and 1928, pp. 620–622.

it does not indicate less dominance of the father over the others, or vice versa. This question of domination was studied by Paul Meuriot, who quotes the following two verses, describing family life in 1767 and 1870, respectively, from Hasbach's study of English agriculture.[17]

The farmer's at the plow
The wife milking the cow
The boys thrashing in the barn
The daughter spinning yarn
All happy to a charm.

The farmer's gone to see a show
His daughter at the piano
The madam gaily dressed in satin
All the boys learning Latin
And a mortgage on the farm.

If similarity of occupation is a measure, the earlier household was happy and homogeneous. Later the family cohesion decreased. Migration seems to have had nothing to do with tension within the family. Thus the claims of greater domination of the wife and children by the father and husband are not based upon migrations that take place from the farm families to urban communities.

The second series of facts presented as evidence against the claim that the father in the rural family dominates the women and the children to a greater extent than in the urban family is found in a study of insanity, mental disease, juvenile delinquency, abnormal personalities, and other psychical conditions generally attributed, at least partially, to great psychological repression and domination. Considerations of divorce are omitted because those who claim that psychological repression is greater in the rural family argue that since tradition—mores and folk ways—prevents divorce in the rural districts, the divorce rate is not a measure of the psychological domination in the rural

[17] For a discussion of the moral causes of migration see Paul M. Meuriot, *Des agglomérations urbaines dans l'Europe contemporaine,* chap. xiii. The quotations are from Wilhelm Hasbach, *Die englischen Landarbeiter in den letzten hundert Jahren und die Einhegungen,* Leipzig, 1894, p. 307. See also Meuriot's reading in this chapter.

family. They argue that the wife is prevented from securing a divorce because of the custom of the community and because of her inability to make a living alone in the only work she knows, agriculture; and that because of the geographic isolation of the rural family greater repression by the father or husband without interference by the community or the state is permitted. This male domination fosters psychological unrest among the rural children and causes them to leave the farm for the cities, but the mother or wife cannot leave or secure a divorce.

In meeting this argument it seems logical to assume that any repression within the rural families, where the women and children cannot leave immediately, would result in a higher rate of mental disease, psychological derangements among women and children, suicide, juvenile delinquency, and other abnormal behavior. In other words, if women and children in the rural families were repressed unduly and if the women were prevented from breaking up these unhappy unions at all and the children only after reaching manhood and womanhood, there would undoubtedly be a higher rate of mental disease than in the city.

What are the facts? The data given in the chapters dealing with insanity, mental disease, suicide, crime, psychopathic persons, juvenile delinquency, the use of drugs and stimulants, and so on, suggest a quite different conclusion. That is, if there is a great amount of inescapable repression within the rural family, the results, nevertheless, are better formed, more rounded social personalities of the women and the children, judged from the point of view of the indices mentioned above. It is clear that insanity, mental disease, suicide, marital infidelity, juvenile crime, crimes against the family, and so on, are less frequent in the rural districts than in the urban. This whole array of facts reveals that either there is less harmful subjection within the rural family or this repression does not result in deranged and abnormal personalities, although every other study of subjection and repression shows that it does so.[18] This second argument may be concluded with the statement that this supposedly greater subjection

[18] See Pitirim A. Sorokin, *Social Mobility,* London and New York, 1927; Andrew W. Lind, *A Study of Mobility of Population in Seattle,* The University of Washington Press, 1925, chap. iv; H. Demain, *Les migrations ouvrières à travers la Belgique,* Louvain, 1919, chap. vi; and various chapters in Pitirim A. Sorokin and Carle C. Zimmerman, *Principles.*

of the women and children in the rural family does not play an important causal rôle in migration from the farms to the cities. Since there is no evidence of more repression in the country family than in the city family, it cannot be argued that repression is an important factor in migration to the cities.

The third objection to the theory is that most rural children are much older when they leave home than city children; that a smaller proportion of the rural children leave home at all; and that a greater number follow the occupation of their fathers and live on the same homestead than among the city families as a whole or among any of the important classes of the city families. In other words, if psychological repression is a factor in migration, then migration or horizontal movement from the farm family and from the homestead would be a good index of repression within the family. Now we have shown in chapter iv that the tendency of the farm children to abandon the family occupation is less marked than that of the city children (inter-occupational mobility); that the migration from the family homestead to some other homestead, boarding house, or hotel is less on the farm than among city families and homesteads as a whole; that these migrations between occupations and between homesteads among farm families do not take place at an earlier age than those in the cities; and that the total data give no evidence that there is greater repression within the rural family. From these arguments and facts it is clear that either repression is not a factor in migration or that there is less repression within the rural homesteads and families.

As additional proof of the statement that farm children stay in the parental homes longer on the average than children of other families may be cited the data from a study of the movements of the open-country population in three townships of northeastern Ohio. These give the proportion of farm and nonfarm children 18 years of age and over who were living at home and away from home. The results are given in the table below.[19]

Similar conclusions are reached by Dwight Sanderson in a study of three townships in New York. On the farm the average

[19] See Vol. I, chap. iv, of this work; Sorokin and Zimmerman, *op. cit.*, chap. ii; and Charles E. Lively and P. G. Beck, in the Ohio State University Agricultural Experiment Station Rural Sociology Bulletin No. 489 and Mimeograph Bulletin No. 4, July, 1928, p. 21.

PERCENTAGE OF CHILDREN 18 YEARS OF AGE AND OVER LIVING AT HOME IN THREE TOWNSHIPS OF NORTHEASTERN OHIO

COUNTY	FARM FAMILIES		ALL OTHER FAMILIES	
	Males	Females	Males	Females
Ashtabula	29	14	7	22
Trumbull	47	40	31	10
Medina	26	27	38	21
All three	36	28	28	14

number of children living at home per family was 1.52 as contrasted with 0.90 in the villages. On the farm 31 per cent of the families had no children living at home as compared with 51 per cent of the village families.[20]

The fourth criticism of this theory is that, even if we grant that repression exists, it is not clear why it must necessarily lead to migration from the country to the city. Repressed members of the family separate themselves from it, establish their own farms, and are freed from repression without migrating to the city or leaving the field of agriculture. As a matter of fact, in the chapter on the family one sees that this is the usual solution of family conflicts among the peasants and that it is an easier one than going to the city. The theory ought to disclose that migration to the city is the only escape from repression but it cannot show this and therefore it is logically unconvincing.[21]

A fifth argument of importance is presented in a study of the attitudes of the rural youth. These investigations disclose that generally the children do not complain about the treatment received from their parents, but rather, they give other reasons for migrating to the cities and express a general fondness for farm life. Kirkpatrick studied this problem in detail:[22]

Among other things, the study showed that generally farm youth like the farm and village youth like the village as a place to live . . . the

[20] Dwight Sanderson, in the Cornell University Agricultural Experiment Station Memoir No. 111, Table 16.

[21] In the United States this question has been dealt with by Lively and Beck, in the Ohio State University Agricultural Experiment Station Bulletin No. 489; by J. T. Sanders, in the Oklahoma Agricultural Experiment Station Bulletin No. 195; and by W. A. Anderson and C. P. Loomis, in the North Carolina Agricultural Experiment Station Bulletin No. 275.

[22] The quotations are from *Rural America,* June, 1929. See also Ellis L. Kirkpatrick, *Attitude and Problems of Farm Youth,* United States Department of Agriculture Extension Service Circular No. 46, 1927.

like or dislike for farming and farm life and the stated preferences of occupations appeared to have little or no relation to school status of the boys and girls, to conveniences in the home, or to participation of the boys and girls in group activities. . . . The farm youth included in the study appeared to recognize no specific problems pertinent to farming or to rural life. . . . The apparent like of farm youth for farm life was quite surprising to some who participated in the study. The study had been undertaken on the assumption that farm boys and girls, of the ages 10 to 20 years, would register almost an universal dislike for farming and for farm life.

Kirkpatrick also cites several important cases illustrating how sometimes almost fortuituous circumstances or economic opportunities draft the spare farm children into other occupations without regard to their preference for farm life.

After all, the choice of and preparation for an occupation as a means of making a living is pretty much a matter of chance. Choices made are often changed and plans developed are often remolded or discarded entirely. This is indicated in the following record of observations of two farm families of one typical farming neighborhood or community of a generation ago. These several families constitute those with boys and girls of the ages of about 10 to 20 years in a rural school district.

In family One, there were three boys, A, B, C, and one girl, D. At the ages of 10–20 years none of the four expressed any serious dislike for farming. The farm was small and it was recognized that only one of the boys could find an occupation on the home farm. The four children were made to complete the course of study in the open-country and the village school; the equivalent of about ten grades. All were given "free hands" in the choice of occupations. Each taught for a time in the open-country schools of the home and near-by communities.

A, who had a special liking and aptness for working with tools, especially for grafting and budding trees, established a nursery on the home farm and conducted it for several years. In order to learn the science of plant production he went to an agricultural college and enrolled as a student of horticulture. During his sophomore year he joined the "student volunteer movement" and became enthusiastic in regard to the foreign mission field. On graduating from college he accepted a position as teacher of horticulture in a western state college in order to pay his college debts and to await an opportunity to go to the foreign field. At present he is a county agricultural agent.

Becoming tired of teaching in the open-country schools at the end of the fourth year, B decided to take up farming as a life work. He

hired out to a farmer to get a start. At the end of the first summer's experience as a farm hand, by mere chance he was offered the principalship of a village school. During the school year he developed a liking for teaching and to prepare himself to teach in town and city schools, he enrolled in the education course at his state agricultural college. He graduated from the horticultural course, taught horticulture for four years, took graduate work in rural sociology and is now a research worker in the field of rural social science.

C's choice of school teaching was primarily to get enough money to go to a denominational college to prepare for the ministry for which the "Lord had called him" (along with two of his schoolmates). One summer's experience at a denominational college convinced him that "if ministers were like that" he would change his plans. He turned again to teaching and working between school terms on the home farm. Through the influence of his brother he entered the state agricultural college where he planned to specialize in horticulture. In college he developed a liking for agricultural journalism and at present is employed as a journalist.

D, the girl in family One, on tiring of country school teaching, worked as a hired girl in farm homes. Next she obtained a loom and wove carpets and rugs for neighboring families. Tiring of this occupation, she turned again to teaching, in which occupation she died at the age of 30.

There were two boys, A and B, and one girl, C, in family Two. Largely through the father, who was farmer, school teacher, "horse doctor," and a "religious enthusiast" by turns, the "Lord called" the two boys to the ministry. Both decided to use the country school to attain the first steps in their objectives, and after teaching a year or more entered a denominational college. A, who preceded B by a couple of years, got through successfully by filling pastorates in village and open-country churches and accepted a call from a country church. He resigned to attend the seminary, took up boys' work in the Y. M. C. A., and is now a pastor in a city church.

B served as night clerk in a hotel as a means of making his way in college. He "got in with the wrong crowd," misused some of the hotel funds, failed in his college course, and is now employed in a city laundry.

C, the girl in family Two, eager to have a career, entered the denominational college attended by her brothers. She became engaged to a "would-be" minister and returned home at the end of the freshman year to teach school in order to replenish her funds. After teaching a year, she married a local carpenter and painter who later became a printer and now publishes a country newspaper.

These cases carry little indication of dislike for farm life at the ages which they represent. They suggest the prevalence of a variety of preferences for occupations at these ages. Further they suggest that the preferences for specific occupations at the ages of 10 to 20 years are seldom realized. Other occupations of life work, doubtless affording either more or less satisfactions or values in life, are substituted or accepted instead.

Another comprehensive study of the attitudes of the farm youth towards farm life and of his reasons for migration indicates the satisfaction of the youth with farm life, the prevalence of economic reasons for migrating, and little or no dissatisfaction among the juveniles with the treatment accorded them by their parents, especially their father. We take the liberty of quoting in detail from this study by E. L. Morgan and H. J. Burt.[23]

Attitudes of young people towards farm life in particular.—The second essay written by the high school young people had to do with the advantages and disadvantages of farm life. . . . It would not be surprising if the young people in the rural communities studied should give diverse and unimportant items in listing the advantages and disadvantages of farm life. Whatever the figures may reveal we cannot escape the assumption that what rural boys and girls think about farm life is of vital importance to the development of country life in the immediate future. . . .

Only the leading five items under advantages and the leading five under disadvantages are given. Under farm life advantages, 57 per cent of the 393 boys and girls list fresh air as the leading item. Fifty-six per cent speak of health in general, 28 per cent mention pure food, 19 per cent protection from urban dissipations and dangers, and 18 per cent outdoor life. The first three and the fifth apply to physical health, and the fourth to moral and social health. The primary importance given to these leading items indicates an appreciative judgment and a wholesome emphasis . . . the separate figures for village boys, village girls, country boys, and country girls . . . further distinguish between those with and without farm experience, and between those with and without village experience. All of the groups express about an equal appreciation of the item fresh air, and of the item health in general. Under the item pure food, the girls in every case, as might be expected, mention this item more frequently than the boys. The item of protection from urban dissipations and dangers is featured more often by the boys than by the girls. Outdoor life is given more

[23] See the Missouri Agricultural Experiment Station Research Bulletin No. 110, 1927.

prominence by the girls. The differences noted appear to be differences based on sex, and have little or nothing to do with the matter of farm or village location and farm or village experience.

Under farm life disadvantages, 215, or 55 per cent, of the young people mention poor schools, 37 per cent speak of distance, 28 per cent put down the lack of entertainment and amusement, 22 per cent complain about poor roads, and 22 per cent are impressed by the fact of long hard work. The differences between groups are so small as to be scarcely worth remarking. Indeed the remarkable feature is that so little difference exists. In other words, these five leading items seem to have impressed the several groups about equally in spite of differences in sex, location, or experience. The unusually high percentage of country girls with village experience who speak of poor roads and long hard work is the only important exception to these statements. It is difficult to understand why these country girls emphasize these two items, when their brothers (country boys with village experience) attach no undue importance to them.

The substantial character of these leading five items is worthy of special note. Evidently these rural young people are thinking straight about the disadvantages of farm life. Schools, distance, entertainment, roads, and work are basic elements in modern life. The young people are applying the acid test of fundamentals to farm life.

If we are justified in concluding that these rural high school boys and girls are keenly intelligent about the advantages and disadvantages of farm life, it is now in order to ask if they consider the advantages to be greater than the disadvantages. Evidently they do not, . . . for only 19 per cent say they would prefer to live on the farm always while 66 per cent do not prefer farm life. . . .

If we may assume that a prejudice against farm life signifies a preference for village life (or some larger unit), then the following conclusions may be stated from the figures:

1. Each group (village young people or country young people) has a preference for its own environment, and a prejudice against the other environment.
   a. The strongest advocates of village life are village boys and girls with no farm experience.
   b. The strongest advocates of farm life are country boys and girls with no village experience.
   c. There is a tendency for farm experience, on the part of both village boys and girls, to increase their preference for farm life.
   d. There is a corresponding tendency for village experience, on the part of both country boys and girls, to decrease their preference for farm life.

2. Country boys (both with and without village experience) show a greater preference for farm life than do country girls (both with and without village experience).
3. Village girls with no farm experience show the least preference for farm life, while country boys with no village experience show the greatest preference for farm life.
4. Village experience seems to be more potent in drawing country young people to the village than country experience is in drawing village young people to the country. This is to say that when young people know both sides of the question from experience the lure of the village is relatively stronger than the lure of the farm. As country young people gain more village experience through an increased patronage of village schools and other service agencies it seems possible that they may come to have still less preference for farm life than the figures at hand now indicate.

In the interpretation of this material concerning preference for farm life one must remember that the farming industry is still in a state of general economic depression from which it seems to be only slowly recovering. This state of affairs doubtless has much influence upon the attitudes of rural young people towards farm life in general at the present time.

The attitudes, activities, and activity-wishes of young people migrants.—This portion of the study applies to all those young people 14 to 30 years of age, inclusive, who have moved from, moved into, or returned to the communities A, B, C, and D, between the years 1922 and 1926 inclusive. . . . This section is concerned with young people migrants in an effort to size up the community life of the young people from the viewpoint of those who have had the experience of migration. The questionnaires sent to the migrants asked, among other things, the real reasons for leaving, returning, or moving into the communities, as the case might be. The leading reasons mentioned by these young migrants are listed below. . . .

It will be noted at once that the same three items occur in each of the three tables [only one table reproduced here]. These items are economic reasons, schooling, and parents moved. Those three items, together with marriage and special circumstances, constitute the leading reasons for migration as given by the migrants.

The predominance of economic reasons as given by 134 of the 283 persons who have left these communities indicates that the young people seek economic opportunities which the home communities do not provide. This situation is mitigated to some extent by the fact that 24 have moved in with the expectation that such opportunities were available and that 32 persons have returned to the home com-

	Economic Reasons (Employment, etc.)	Schooling	Parents Moved	Marriage	Special Circumstances	Miscellaneous
Leading reasons for leaving the community (persons represented, 283)	134	70	45	31	..	3
Leading reasons for returning to community (persons represented, 69)	32	9	7	..	13	8
Leading reasons for moving into the community (persons represented, 107)	24	22	43	..	..	18

munity for employment reasons. In the latter case, however, it is clear from a study of the questionnaires that many of these persons had found the industrial struggle in the outside world too severe, and had returned either because they had no job or because they hoped to find less strenuous conditions of employment back in the home community.

In a more recent study a comparison is made of the advantages of children who left the farm with those of the children who stayed at home.[24]

These data, not all of which are given above, disclose that on the whole the condition of the children in the homes of the migrants are no worse than in the homes of the nonmigrants. Those who left the farm had worked on farms away from home 3.7 years as compared with the 4.2 years of those who remained on the farm; they did more chores about the homes; they were allowed a slightly lower share in the live stock or crops; they helped less in planning the farming operations before their majority; they worked 0.3 of an hour longer in the field each day during the busy season; they went to towns for amusements somewhat less frequently—1.7 as compared with 2.0 times a week; a smaller percentage had regular vacations; a smaller percentage

[24] See A. A. Smick and F. R. Yoder, *A Study of Farm Migration in Selected Communities in the State of Washington,* Washington Agricultural Experiment Station Bulletin No. 253, 1929.

RELATIVE ADVANTAGES OF CHILDREN REMAINING ON FARM AND LEAVING FARM IN THE STATE OF WASHINGTON

BASIS OF COMPARISON	1,618 CHILDREN STAYING ON THE FARM	378 CHILDREN LEAVING THE FARM
Average number of "chores" done by each child per day	1.6	2.1
Percentage of children allowed a share in crops or live stock before reaching majority (21)	15.2	13.9
Percentage of children allowed to help plan the farming operations	16.4	13.9
Percentage of children paid wages before majority (21)	6.6	12.2
Average number of trips to towns, attendance at shows, or attendance at dances (per month)	5.6	6.6
Percentage of children permitted regular vacations	29.1	25.0
Average attendance per month at church or Sunday schools	6.1	7.0
Percentage of homes with		
Running water	35.1	45.3
Baths	43.0	43.3
Lighting systems	28.4	38.7
Automobiles	31.9	57.9
Telephones	48.9	71.6
Musical instruments	70.7	84.6
Radios	8.5	7.9
Daily papers	48.2	81.1
Children's magazines	35.0	46.5
Novels in homes	75.4	73.0

—2.5 as compared with 5.6—were free Saturday afternoons; a smaller percentage—51.5 as compared with 53.9—were church members; a smaller proportion—7.9 per cent as compared with 8.5—had radios in the homes; and a slightly smaller percentage had novels in the homes.

On the other hand, more of the migrants to cities were paid wages before reaching their majority; their busy season was 0.3 per cent of a month shorter; they attended movies, dances, and churches, Sunday schools, and young people's meetings more frequently; a larger proportion had in their homes running water, baths, lighting systems, telephones, and musical instruments; automobiles; local papers, daily papers, children's magazines, farm

papers, other magazines, and agricultural bulletins; and nearly all kinds of books except novels; they had time and opportunity to read and did read all kinds of books, papers, and magazines, other than agricultural works, more often; more of them attended high schools—71.7 per cent as compared with 44.7 per cent—and college—20.6 per cent as compared with 11.7 per cent. From these data, one can reach no other conclusion than that the objective results reveal that the migrating children were as well, or better, off than those who stayed at home.

There is no need to go further, because these data are sufficient to indicate that the farm boys and girls themselves make no great complaint about the treatment by their fathers. This is in itself an important consideration in the discussion of the alleged male domination in the rural families as an important factor in migration to the cities. Furthermore, the objective studies reveal that the migrating children are even permitted more liberties at home on the whole than the nonmigrating children.

It is clear that three fundamental factors—demographic, economic, and scientific—acting together, have been and will continue to be the important reasons for migration.[25] While many parents and children do not get along with each other, and some of these children go to cities, this situation cannot be said to be more prevalent in the rural districts than in the urban, except in so far as it is due to the fact that the urban families in many cases have no children with whom to quarrel.

B. THE SELECTION OF MIGRANTS

I. FACTORS

1. *Age.*—How do migrants differ from a normal population in age distribution? Since age and sex selectivity are problems that have always been studied in detail and are more or less settled, we shall merely summarize the conclusions and turn to the more important and unsettled problems of selectivity according to innate ability.

A study of an enormous amount of relevant data permits the

[25] See the analysis by George F. Warren in the Cornell *University Extension Service News,* Vol. VI, No. 2 (February, 1923); E. C. Young, Cornell University Agricultural Experiment Station Bulletin No. 426, pp. 39 ff.; and New York State College of Agriculture and Home Economics, *Farm Economics,* No. 65, March, 1930, p. 1275.

following conclusions.[26] (a) Most migrations to the cities take place in early adulthood, during the years of greatest physical activity. (b) The majority of the females migrate at a somewhat earlier age than males—the curve ascends somewhat earlier and declines somewhat earlier. (c) In cities there is a greater number than in the country of young, active, and productive adults, who are the most productive economically and who display less cautiousness than unsophisticated youth or sophisticated old age. (d) For the most part, migration takes place at an age when nonmigrant populations begin to settle down and build homes for themselves. It is like army service in that it disturbs the routine of the ordered life of nonmigrating peasant communities. These conclusions are generally accepted and need no special proof here.[27] Age is the chief factor of selection, because migration requires great energy, great adaptability, and adult judgment. (e) The social effects of age selectivity in urbanization seem to be as follows: Young persons go to the cities during adolescence or soon after. The females, leaving some years earlier than the males, no doubt because of earlier maturity, add to the disproportionate age distribution of city populations. The economic productivity of city populations is thus increased, since the younger adults have greater productivity than children or aged persons, and they have, furthermore, fewer children and aged persons to support. This distribution of age groups increases the tendency for people in cities to have higher average incomes than in the country and to consume greater quantities of economic goods per capita.[28]

This adult period is the age of greatest mobility, of the greatest ingestion of food, and of the greatest output of energy. Such a

[26] Sorokin and Zimmerman, *op. cit.*, chap. xxiv. See also this *Source Book*, Vol. I, chap. ii, for corresponding data and statements of the Political Arithmeticians, especially Richard Price, p. 103.

[27] See Sorokin and Zimmerman, *op. cit.*, pp. 540–557; *Annuaire statistique des grandes villes*, 1927; George von Mayr, "Die Bevölkerung der Grossstädte," *Die Grossstadt*, ed. by Theodor Petermann, Dresden, 1903, pp. 73–147; the reading from the work by Paul M. Meuriot, following; *Statistisk Årsbok för Sverige*, 1925, pp. 62–63; *Statistisk Årsbok för Stockholms Stad*, 1914, pp. 91, 111; *Annuaire statistique de la ville de Paris*, 1921–1922, p. 290; Jean Guillou, *L'émigration des campagnes vers les villes*, pp. 296 ff.

[28] See Otto Schwarz, "Das soziale Schicksal in seiner Abhängigkeit von dem Alter," *Allgemeines statistisches Archiv*, XV, 138–148 (1925); Nathan P. Levin, "A Statistical Study of the Economic and Sociological Significance of Population Age," *Journal of the American Statistical Association*, XXIII, 40 (March, 1928).

congregation of persons in this active stage of life, having few children to support and relatively few home and community ties and having the intense stimulation of city life, increases its mobility and the tempo of its movements very rapidly.[29]

Weber's conclusions concerning this phase of the problem are worth noting.[30]

As a result of the presence of a relatively large number of persons in the active period of life in urban populations, one would expect city life to be easier and more animated, the productive classes being large and having a smaller burden to bear in the support of the unproductive classes. One would also expect to find more energy and enterprise in cities, more radicalism, less conservatism, more vice, crime, and impulsiveness generally. Birth rates should be high in cities and death rates low, on account of the age grouping.

In other chapters we prove that many of Weber's predictions are justified. It must be realized, however, that age distribution is only one of the numerous variables affecting social conditions. There are, for instance, city populations that, from the point of view of age distribution, might be expected to have high birth rates but because of other factors do not. The same variations may be found in all social processes having complete causes.

2. *Sex.*—The migration to the cities has been selective as to sex: there is a greater proportion of females in the urban population as compared with the rural.[31] However, this correlation between

[29] See Carle C. Zimmerman and John D. Black, *How Minnesota Farm Family Incomes Are Spent,* University of Minnesota Agricultural Experiment Station Bulletin No. 234, 1927, p. 33; A. Slosse and E. Waxweiler, *Enquête sur l'alimentation de 1065 ouvriers belges,* Brussels, 1910.

[30] Adna F. Weber, *The Growth of Cities in the Nineteenth Century,* pp. 303–304.

[31] Leon E. Truesdell, *Farm Population of the United States,* p. 235; Statistical Abstract of the United States, 1922, p. 13. We must discriminate carefully between long-distance — generally country to country — migration and migration urbanward, which, on the whole, is a short-distance migration within the same country. There are conspicuous exceptions, as in the United States during the first years of this century. Long-distance migration is primarily male. For proofs of this statement see the International Labor Office, *Migration Movements, 1920–1924,* Series O, No. 2, pp. 20, 31, and appendix, and Harry Jerome, *Migration and Business Cycles,* National Bureau of Economic Research Publication No. 9, 1926, pp. 37 ff. In the southern states, the negro migrants to the cities include a preponderance of females. See Thomas J. Woofter, Jr., *Negro Migration, Changes in Rural Organization and Population of the Cotton Belt,* New York, 1920, Part II, chap. iv, p. 149. In the entire urban districts of the United States in 1920 there were 95.4 negro males per 100 negro females as compared with 100.3 males per 100 females on farms. The urban districts of New York state had 91.6 negro males per 100 females in 1920. On the other hand, urban districts of Illinois in 1920 had 104.1 negro males per 100 negro females. However, both New York and Illinois had high proportions of males on farms (126.7 and 113.7,

urbanization and preponderance of females does not obtain in every large city.[32] In many cities quite the opposite tendency is exhibited; and in the same city conditions may change from time to time according to the changes in forces selecting the population. In this respect, feminization, already discussed as an urban characteristic, shows greater variability in cities than in the rural districts.

This raises the question whether great feminization is due to the greater number of females born in urban populations as compared with rural populations, to a greater migration of females to the cities and a greater migration of males from the cities, or, finally, to a greater adaptability of females to urban life, permitting them to survive in greater proportions. This question has been discussed by Weber, who reaches the following conclusions, attributing the excess of females in the cities to all four factors.[33]

The excess of females in any population is usually ascribed, first, to the heavier mortality of male than of female infants, which within the first year usually effaces the superiority of male births. Then comes the great mortality of adult males due to the dangers of their occupations, as well as to vice, crime, and excesses of various kinds which shorten life. Now all of these forces are accentuated in cities, producing a greater excess of females there than elsewhere, even without the influence of emigration, which increases the surplus of women in cities.

respectively). Thus there is rather convincing evidence of both long- and short-distance migrational selectivity for negroes. One set of forces attracts the males (long-distance migration to a totally new environment) and another attracts the females (partly long- and partly short-distance migration to cities). See Truesdell, *op. cit.*, pp. 245 ff.; Emmett J. Scott, *Negro Migration during the War*, New York, 1920; and Meuriot, *op. cit.*, chaps., xiv, xvi, and xxii. A study of such countries as China and Siam contradicts still further the theory of a general migration of females to cities. Bangkok, the largest city in Siam, with almost a million inhabitants, contains considerably more males than females. This condition is due in part to the large number of male Chinese immigrants, but also to the important fact that short-distance migration is difficult in a country such as Siam. Moreover, the family mores dominate in the country, and as a result fewer females than males, proportionately, left home in all but one or two of the 40 villages studied. See Carle C. Zimmerman, *Siam: Rural Economic Survey, 1930–1931*, Ministry of Commerce and Communications, Bangkok, Siam, 1931. The situation in Siam obtains in all China as well. See *Ching Ho*, published by the Department of Sociology, Yenching University, Peking, China.

[32] See Pitirim A. Sorokin and Carle C. Zimmerman, *Principles*, pp. 546 ff.; the reading from Paul M. Meuriot, given below; Gustav Elfert, "Stand und Bewegung der Bevölkerung," *Statistisches Jahrbuch deutscher Städte*, 1927, pp. 338 ff.; Émile P. Levasseur, *La population française*, Vol. II, Paris, 1891, p. 389; the *Annuaire statistique des grandes villes*, 1927; the *Statistisches Jahrbuch der Schweiz*, 1923, pp. 37, 38; the *Statistisk Årsbok för Sverige*, 1925, pp. 5, 6; and the *Statistisk Årsbok för Stockholms Stad*, 1914, p. 93.

[33] Weber, *op. cit.*, pp. 299 ff.

In the cities also, the superiority of male births over female births is smaller than in the country.

A summary of the data in various statistical sources suggests the following conclusions:[34] There is no real or permanent correlation between urbanization and the greater proportion of female births in the city, which appears to be due to the ratio of the sexes at conception. The ratio of males to females born in cities and rural districts fluctuates from time to time in the same country, in the same cities, and in the same territories. Furthermore, at any one time different proportions may be found in adjacent countries and in countries of the same degree of urbanism. What degree of correlation does exist between urbanization and the proportion of females in the population is due primarily to the selective influences operating between cities and rural districts and between territories of immigration and emigration. At times the great number of female births adds to the feminine constituency of the urban population; at others an excess does not exist and therefore the female births play no part. The question of why the number of female births in the city is greater at times and less at others cannot be answered definitely because the causes of sex determination are not known.[35]

Of course not all the reasons for the feminization of urban populations through selection can be given, but one of the most important is undoubtedly the division of labor. Cities often offer employment more suited to women. The fact that employment

[34] See Sorokin and Zimmerman, *op. cit.*, pp. 549–552; the United States Bureau of the Census, *Birth, Stillbirth, and Infant Mortality Statistics, 1922*, 1924, pp. 153–173; "Résumé rétrospectif," *Annuaire statistique* (of France), 1909, p. 10; *Annuaire statistique de la ville de Paris*, 1922, pp. 26–27; *Statistisk Årsbok för Stockholms Stad*, 1914, p. 89; *Statistisk Årsbok för Sverige*, 1925, pp. 50 ff.; *Annuario statistico italiano*, 1922–1925, p. 20; *Annuaire statistique de la Belgique*, 1926, p. 127; *Statistisk Aarbog* (for Denmark), 1926, p. xxxi; *Statistisches Jahrbuch der Schweiz*, 1925, p. 9; Wilson Gee and John J. Corson III, *Rural Depopulation in Virginia;* and many of the other studies cited in this *Source Book*.

[35] See Sorokin and Zimmerman, *op. cit.*, pp. 553–555; and also Corrado Gini, *Il sesso del punto di vista statistico: le leggi della produzione dei sessi*, Milan, 1908; Richard B. Goldschmidt, *The Mechanism and Physiology of Sex Determination*, London, 1923, pp. 251 ff.; Karl E. Busing, *Die Theorien über das Geschlechtsverhältnis der Geborenen und die Geschlechtsbestimmung beim Menschen*, Stuttgart, 1928; J. Arthur Harris, "Relationship between Pregnancy Order and Birth Order and Length and Weight of Newborn Infants," Proceedings of the Society for Experimental Biology and Medicine, XXIII, 806 ff. (1926); Maud DeWitt and Raymond Pearl, "On the Relation of Race Crossing to the Sex Ratio," *Biological Bulletin*, Vol. XV (1908); Bureau of the Census, *Birth, Stillbirth, and Infant Mortality Statistics, 1922*, pp. 30, 31; and S. R. Winston, "The Influence of Social Factors upon the Sex-Ratio at Birth," *American Journal of Sociology*, July, 1931.

is a factor in the selection of migrants to the city also explains why the correlation between urbanization and feminization is by no means constant. Certain types of cities, steel and coal towns, for instance, offer employment primarily to men.[36] It is in this type of community that the ratio of males to females is higher than in the rural communities. In many instances such cities have a much greater proportion of males than females. In other towns, those built around industries offering more employment to women, there is a greater proportion of women. There is a tendency, however, for both types of industry to be built up in the same community wherever the available labor supply makes it possible.

A second factor in the feminization of cities is that agriculture, as it is carried on in family units, offers very little outlet for women except in family life. Women who do not care to marry and women who do not have an opportunity to do so find the best opportunities in cities.

Other factors are the greater stimulation obtained from the cities, the higher degree of anonymity, the more general existence of prostitution, and the larger number of physical comforts that appeal to the innate characteristics of women. In addition, urban life may be more suited to females, as the differences in mortality statistics seem to indicate.

The final reason is that farm property is usually inherited by the males, although in most cases they must recompense the others. Since females are thus uprooted and forced to leave the home farms, in some countries at least, to a greater extent than men, it is inevitable that more of them should migrate to cities.

There are several social results of the feminization of urban populations. In the first place, there are fewer opportunities for women to marry. Considering the population of the United States as a whole, every 100 females have 104 chances for marriage. In 1920 every 100 females in the rural population had 112 chances, in the villages 100 chances, and in the cities 98 chances. These

[36] See the chapter on the family for an analysis of the types of occupations open chiefly to men, such as manufacturing, mining, transportation, and other occupations. Hence we see that a steel town, such as Gary, Indiana, or manufacturing towns, such as Flint, Michigan, which specializes in automobiles, and Akron, Ohio, which specializes in rubber goods, may have greater proportions of males. Governmental headquarters, cities that do not specialize, and cities with high proportions of commercial workers, domestic servants, and professionals would be expected to have a greater proportion of females.

are the proportions of the sexes; if the analysis be limited to the population of marriageable ages, the differences would be greater. If we grant the assumption that the scarcity of something desired makes greater sacrifice necessary to acquire it, we may say that the differences in the proportions of the two sexes in town and country contribute to the increase in prostitution and extra-marital sex life in the cities. Generally speaking, urban females are forced to make greater sacrifices for sex life and sex companionship. This is a mere hypothesis but it may have some validity. Coupled with greater anonymity, more secondary contacts, and more opportunities, the condition we have been describing may explain most of the great amount of prostitution and of extra-marital sex life in the cities.[37]

This feminization of cities may also mean an increase in the productive efficiency of society as a whole. It is possible that the increase of females may accentuate those traits of an urban society that originally attracted the women. Thus we see increasing opportunities for the employment of women, and a greater number of occupations open to them. A corollary of some validity is that sex differences, not only in the opportunity for employment but in social life, moral behavior, and minor or major vices, tend to decrease as urbanization increases. Living alone, going places without escort, smoking, drinking, standing up in street cars—all formerly considered masculine privileges—tend increasingly with the increase of urbanization to be assumed by women.

3. *Innate and inherited characteristics.*—The next problem concerns innate factors in selection. The idea that cities select a certain physical type from the rural population is by no means new, for it appears in practically every work of any significance that discusses migration or rural and urban relationships. In chapters xvii to xix of this volume, reference has been made to innumerable variants of this theory. Its most popular version is that the cities are selecting the more intelligent population, while to an increasing extent the dullards are segregating in rural districts. Hansen, Ammon, and Vacher de Lapouge based this theory upon differences in stature, pigmentation, and shape of head

[37] See William F. Ogburn, "Factors Affecting the Marital Condition of the Population," Proceedings of the American Sociological Society, XVIII, 47 ff. (1923); and Ernest R. Groves and William F. Ogburn, *American Marriage and Family Relationships,* New York, 1928, chaps. xiii-xiv.

between the rural and urban population. Additional proofs were presented in various works. Other groups maintained this theory of positive selection because of the differences in the rural-urban distribution of feeble-minded and subnormal individuals; some because of differences in intelligence quotients, scholastic achievement, and the origin of men of talent or genius and of exceptional children; some because of differences in the size of average income, the distribution of wealth, or participation in political movements for liberty and freedom; and still others because of differences in standards of living, and so forth. All these and numerous other arguments have been offered to prove the selectivity of migration towards the cities. On the basis of the alleged proofs of this selectivity, several interesting theories as to the social functions of the city and the country in the life history and life processes of a nation or society have been propounded, of which only a few of the more important are mentioned here.[38]

The major premises of the theories of Georg Hansen, Vacher de Lapouge, and Ammon are (1) that urbanization is the blooming period of the life cycle of nations and societies; (2) that urbanization and complex societies are possible only because of the accumulation and use of much talented human material; (3) that the primary source of this talented human material originates in rural life among the farmer-peasant classes; (4) that urbanization usually begins when an excess of talent is accumulated among the rural classes; (5) that this excess of talent, with its genius in social organization and industrial technique, makes possible a complex society; (6) that the cities continually attract more of the biologically capable than of the less fit; and (7) that this selective influence of the cities is the key unlocking the doors first to urban greatness and later, by differential fertility, to urban

[38] See Georg Hansen's theory in *Die drei Bevölkerungsstufen;* Georges Vacher de Lapouge, *Les sélections sociales; cours libre de science politique professé à l'Université de Montpellier (1888–1889),* Paris, 1896; and Otto Ammon in *Die natürliche Auslese beim Menschen,* Jena, 1893, which elaborates and verifies inductively many of the important phases of Hansen's theory. See William Z. Ripley, *The Races of Europe: A Sociological Study,* New York, 1899, chap. xx; Frank H. Hankins, *The Racial Basis of Civilization; A Critique of the Nordic Doctrine,* New York, 1926, chap. x; Weber, *op. cit.;* Pitirim A. Sorokin, *Contemporary Sociological Theories,* pp. 234 ff. Robert R. Kuczynski in *Der Zug nach der Stadt* gives an elaborate criticism of the theories of Hansen and Ammon. See also Corrado Gini, *I fattori demografici dell'evoluzione delle nazioni,* and H. L. Smith, in Vol. III of Charles Booth's *Life and Labour of the People in London,* London, 1904. For later versions of this theory see especially Ellsworth Huntington, *The Pulse of Progress, Including a Sketch of Jewish History,* New York, 1926, chap. iv, and his other valuable works.

decline. Let us proceed to examine this key to the selective force of urban migration.

We shall summarize the methods and the evidence used to prove or disprove this theory of selectivity in the principal studies, which may be divided for purposes of analysis into three general classes, according to the index used to measure the quality of the population. One group uses the vital index, or, in other words, a physical measure. The assumption is that men are differentiated by such physical characteristics as vitality, longevity, resistance to disease, and so on, and that this differentiation measures the quality of the population, from those with the poorest physical equipment to those with the best health. A second group uses an economic measure, assuming that man is *homo economicus,* that is, that a man tries to do as well economically as he can, and that the economic ladder, therefore, differentiates men as to quality. A third group uses various measures of mental ability as evidence of selective discrimination, such as intelligence tests, the intellectual achievement of children and of adults, or even shape of head—for instance, students used to believe that the long-headed Nordics were brighter than the broad-headed or the round-headed.

These three types of studies include most of the attempts to measure selection, but each makes its own assumptions. Several types of data dealing with crime and the moral characteristics of the population need no separate classification because they may be included under either the mental or the economic index of quality. The facts relating to each type of measurement are summarized with the evidence for or against its operation as a selective force.

4. *Physical and vital characteristics.*—Otto Ammon, Georges Vacher de Lapouge, Rodolfo Livi, Livio Livi, Austin B. Hill, George H. Knibbs, Pitirim A. Sorokin, and many other investigators who have made minor contributions in this field must be mentioned.[39] Ammon and Vacher de Lapouge probably first

[39] See Otto Ammon, *op. cit.,* and *Die Gesellschaftsordnung und ihre natürlichen Grundlagen . . . ,* Jena, 1900; the reading by Georges Vacher de Lapouge given in the chapter on physical characteristics in this *Source Book;* Rodolfo Livi, *Antropometria militare;* Livio Livi, "Emigrazione ed eugenitica, *"Atti del primo congresso italiano di eugenetica sociale,* 1924; Austin B. Hill, *Internal Migration and Its Effects upon the Death-Rates: with Special Reference to the County of Essex* (Privy Council, Medical Research Council, Special Report Series, No. 95), London, 1925; George H. Knibbs,

developed the systematic use of physical characteristics, such as height, shape of head, and so on, as indices; they argued that the existing data gave evidences that these traits influenced selection. Offsetting these investigations and theories, the work of Rodolfo Livi and that of many others proved quite definitely that variations in the physical characteristics of a city population, as compared with that of the surrounding country, could be explained primarily by the fact that urban populations were recruited from large areas and that, therefore, they naturally varied from the surrounding country population, especially when the latter was of a definite physical type. For instance, in countries where the population is tall, as in Scotland, the city population is of a definitely lower average height than the rural, and in countries where the population is short, as in Italy, the average urban population is definitely taller. Rodolfo Livi's law expressing this variation is generally valid as regards most physical traits.

Livio Livi and Austin B. Hill developed the most systematic use of vitality, death rates, disease, and so on, as explanations of selection, and both ultimately reached the conclusion that cityward migration operated to select a large proportion of those better fitted to survive. The evidence relating to physical and vital traits summarized in chapters xvii, xviii, and xix of this work, however, shows that while there is no proof of dysgenic selection by the cities, the rural populations are nevertheless rather better than worse as compared with the urban populations. The studies by Hill, Livio Livi, and others have been analyzed in detail elsewhere.[40] Certain weaknesses in their data and in their methods make their studies inconclusive. The reader may draw his own conclusions. A short summary of the objections to the conclusions presented in these two studies follows:

Austin B. Hill concludes that in England urbanization is selective in spite of the fact that his figures show that the health of the rural districts improved rather than declined during the period of the most intense migration.[41] His figures indicate that

Private Wealth of Australia and Its Growth . . . , Commonwealth Bureau of Census and Statistics, Melbourne, 1918, pp. 15 ff; Sorokin and Zimmerman, *op. cit.*, chaps. iv-ix and chapter xvii on physical traits in this work.

[40] Sorokin and Zimmerman, *op. cit.*, pp. 575–583.

[41] Hill, *op. cit.*

this improvement of rural health was more rapid than the improvement of the health of the city of London, as indicated by the decline in the general death rate as well as in the rate for phthisis. Hill meets this obvious contradiction by assuming that the decline in death rates in the rural districts was due to the decrease of migration, so that the valuable human stock, once carried off to the cities, now stays at home (page 50).

In our opinion it is a very questionable explanation. First, improvement in health in rural districts was most rapid in the decades before that of 1901–1910, a period when migration lost its significance. Improvement began during the years from 1861 to 1870, when migration was at its peak. Were immigration an important factor, greater improvement in the rural health would result from the decrease of migration.

Secondly, it is doubtful whether the period after the decline in migration was long enough for the stock lost by migration to be replaced by propagation. By the author's own logic (page 56) the selective force was weakened in the period of great migration from 1871 to 1880, so that there was really no lessening in the force of migration much before 1900. It is too great a stretch of the imagination to believe that the fertility of the better stocks in these rural districts would replace in ten years the valuable human material carried away in the net migration of 180,000 or more of the population during a period of a hundred years if the migration of these 180,000 were selective. The significance of this remark becomes greater when we remember that net migration by no means expresses all the interchange of population between these districts.

The third argument is that even with a decline in migration from this district to London and the decline in the growth of cities, the earlier analysis indicates that migration is not becoming less significant in relation to natural increase as a factor in the size of the city population. The trend is towards a decline in the rate of natural increase in London. The author must show that the lessening of migration from Essex was not due to a transfer to some other district. In other words London ought to have comparatively lower death rates, because there is no reason to believe that the population would be selected from Essex on one basis and from another district on another.

These conclusions and other criticisms of the validity of this brilliant study lead us finally to the conclusion that it does not prove that a selective force is operating in the cities.

Livio Livi neither claims a positive selection of the migrants to the city nor contradicts the theory of random or chance migration.[42] His contention that the migrants to the cities who return to the country are inferior in health and that they bring back various diseases contracted in the city and diffuse them through the rural population has a great deal of truth, at least in some regions and among some groups of the returning migrants. His contention that transatlantic emigrants are a selected group is unproved, however. The fact that in the provinces from which transatlantic emigration is great the health is no poorer than in the provinces from which there is no emigration or an insignificant one does not contradict the hypothesis of a random selection of emigrants. On the contrary, it is in perfect agreement with such a hypothesis and possibly explains the situation even better than the theory of Livi himself, whose data on the vital superiority of the returning transatlantic emigrants are rather inadequate, based as they are on a very limited number of cases. It appears to us that the situation is much more easily explained by admitting that the whole transatlantic emigration is unselective except as to sex and age. Then it becomes clear that the vitality of the provinces from which transatlantic emigration proceeds is no lower than that of the provinces from which there is no emigration. The pernicious influence of emigrants who have returned plays an additional rôle in an explanation of the situation. Thus, on the whole, the conclusions of this study rather reinforce the theory of random selection.

Omitting further detail, we may summarize briefly the studies of the evidences of positive physical and vital selection. The study of selection in migration has been very popular among investigators, work having been started about as early as on selection in any other field. Secondly, these investigations have been carried on in many countries by students and researchers who on the whole have high records for originality in the social sciences. Thirdly, the studies seem to prove no positive selection but rather to disprove it, because the variations found between the city and

[42] Livi, *op. cit.*

country are explained by more plausible hypotheses (Livi's law); the studies are essentially self-contradictory; and the data on rural and urban physical traits and vitality generally do not substantiate the conclusions.

5. *Income or social class.*—This type of measurement has been used from the beginning of the intensive study of migration. In its earlier form its protagonists included such outstanding scientists as Georg Hansen, Otto Ammon, Hubert Llewellyn Smith, Adna F. Weber, Robert R. Kuczynski, Eduard Brückner, and others. Hansen believed that the rural migrants had such native ability that they entered the city middle classes immediately in a much higher proportion of the cases than the urbanities as a whole. In proof Hansen presented maps of various continental cities and others from Charles Booth's *Life and Labour of the People in London* that seem to indicate that the migrants are located for the most part in the middle-class districts. This argument was answered by Ammon, who presented data to show that the majority of the migrants entered the lower class, especially the unskilled labor class, and only climbed out in subsequent generations. The table below gives a sample of the type of data presented.[43]

PERCENTAGE OF EACH GENERATION OF IMMIGRANTS TO THE CITY OF KARLSRUHE IN VARIOUS CLASSES OF THE POPULATION

CLASS	PERCENTAGE OF EACH GENERATION		
	Lower Classes	Middle Classes	Professional (*Studierten*)
Immigrants	82	14	4
Their sons	41	49	10
Their grandsons	40	35	25

Kuczynski and Weber presented the same arguments. Weber contended that migrants living in the middle-class districts of London were for the most part unskilled servants of the middle classes, for city-born persons refused to do menial work and the upper classes could afford well-trained servants; the middle classes took in country youths because they could not afford high-priced servants. Additional analysis of the data on the occupational

[43] Otto Ammon, *Die Gesellschaftsordnung und ihre natürlichen Grundlagen*, p. 145.

classifications of the migrants before and after coming to the cities, as given by Smith in Charles Booth's *Life and Labour of the People in London,* adds weight to Weber's criticism of Hansen's interpretation of the London study.[44]

Hansen's second argument in support of his theory that emigrants to the city are superior and that the natives of the cities deteriorate was that a greater proportion of the submerged classes in cities are urbanites—composed for the most part of the failures from the middle and upper classes of several generations and also in part of incapable rural migrants. A favorite proof often used in support of this theory is the table in *Life and Labour of the People in London,* which is based upon the records of 1,000 typical cases handled by the charity organization societies of London during one year.

Data on Poor Relief in London

Groups	Total	Born in London	Born Outside London but Resident in London				
			Under 1 Year	1–5 Years	5–10 Years	10–20 Years	Over 20 Years
Charity organization society cases	1,000	596	32	64	74	108	126
Adult population generally	1,000	460					

This appears offhand to be proof of the degeneration of urban populations and the superior ability of the migrants. But we must recognize that this table is not standardized according to age, and age is an important consideration in the interpretation of data on public relief. That is, a young immigrant population is compared with a much older and a much younger native city population. Such a comparison is unscientific and fails to prove the point.[45] Kuczynski and Weber presented equally important data for other cities, which tend to show that even the standardized rates for paupers have a greater incidence among those migrating to the

[44] For data and maps see Hansen, *op. cit.,* especially the appendix. See also Otto Ammon, *Die natürliche Auslese beim Menschen,* chap. xii; and the study by H. L. Smith in Booth, *op. cit.,* especially the table on occupations of migrants, p. 140.

[45] See Kuczynski, *op. cit.,* pp. 95 ff., and the reading from Michael Hainisch, given below.

city than among those born in the city. A sample of these tables follows,[46] but it does not reveal whether the paupers are rural born or born in other cities or are just more migratory than the native populations of cities.

NUMBER OF PAUPERS PER 1,000 POPULATION OVER 26 YEARS OF AGE IN THE CITY OF FRANKFORT ON THE MAIN, GERMANY, 1885

PLACE OF BIRTH	MALE	FEMALE
Frankfort on the Main	46.58	51.70
Elsewhere	57.10	47.96

Furthermore, as already shown in chapter xxi, poor relief agencies in rural districts are so inadequate that some of the paupers are forced to the cities. On the whole the conclusion is that there is no real proof that rural migrants enter the middle classes more frequently than they enter other classes. Furthermore, both these authors and Eduard Brückner have presented data to prove that the rural migrants to Berlin in 1885 did not enter the submerged classes as the length of time spent in Berlin increased but on the contrary improved their economic situation. While among the immigrants who had been in Berlin only five years or less, only 12 per cent were entrepreneurs, among the immigrants who had been in Berlin more than 15 years, 40.9 per cent were entrepreneurs and a much greater percentage were big business employers.[47] These data are sufficient to show the one-sidedness and inadequacy of Hansen's theory. The theory of Kuczynski and Weber that the rural immigrants are inferior to the urbanites, and that they generally enter the lower urban classes, occupy positions lower than the urbanites, and remain in those low positions, appears as one-sided a theory as Hansen's. If one reveals bias towards the country, the other reveals no less bias towards the city. The recent attempt of Michael Hainisch to prove that the migrants from the country enter only the lower classes in the city is an example of such bias.

Economic indices of selective migration during the twentieth

[46] *Ibid.*, p. 142. Unfortunately case records of many of the charity organizations in America are so kept as to be of little value in the discussion of this problem.

[47] Adna F. Weber, *The Growth of Cities in the Nineteenth Century*, p. 383.

century have been used by several investigators. In a series of studies of migration among Russian peasants, income and size of holdings have been used, among other things, as indices of economic ability and quality; Emil Laur, Michael Hainisch, and others in central and western Europe studied the problem; in several investigations at the Minnesota Agricultural Experiment Station over a period of several years an attempt has been made to weigh the effects of migration from country to city by using income or social level as the measure of quality; migration among the negroes in the United States, especially from the rural South to the northern cities, has also been studied in this way. A brief summary of each of these groups of studies follows:

Russian studies.—A great amount of material gathered by Russian investigators definitely testifies against better selection when the economic status of the peasants is taken as a criterion of superiority or inferiority. These extensive studies, covering samples of hundreds of thousands of peasant households, give consistent data indicating that migrants to the city are almost invariably recruited from the peasants who are poorest, who cannot manage their farm business successfully, and who are failures.

Percentage of Peasant Households Migrating to the City from Various Russian Provinces, 1920–1924

Class of Household	Province of Kursk	Province of Vladimir	North Caucasus	White Russia
Land (in dessiatines)				
None	25.00	42.4	39.1	60.2
Under 2	4.80	6.6	22.0	13.2
2.1– 4.0	1.45	0.5	14.5	2.5
4.6– 6.0	0.29	...	11.4	1.4
6.0–10.0	0.51	...	8.0	1.5
10.1–16.0	...	...	6.5	6.9
16.1–25.0	...	...	2.6	18.0
25 and more	...	...	...	...
Working animal				
None	7.75	14.5	33.4	
1	0.12	0.7	15.8	
2	0.56	...	8.4	
3	...	...	4.7	
4	...	...	2.8	
5	...	...	3.6	

PERCENTAGE OF PEASANT HOUSEHOLDS MIGRATING TO THE CITY FROM VARIOUS RUSSIAN PROVINCES, 1920–1924 — *Continued*

CLASS OF HOUSEHOLD	PROVINCE OF KURSK	PROVINCE OF VLADIMIR	NORTH CAUCASUS	WHITE RUSSIA
Adult worker				
None	7.54	18.1	28.9	
1	3.56	5.4	19.1	
2	1.29	1.4	12.9	
3	0.92	1.0	9.3	
4	1.18	1.3	8.4	
5 and more	...	...	7.3	

These data, which are representative of a great many other Russian studies of revolutionary as well as prerevolutionary time, disclose the fact that migrants are recruited from the poorest peasants.[48] Among prosperous, successful peasants the proportion of those who give up farming and migrate decreases systematically. Only at the very top, among the rich peasants, is there a slight tendency in some regions for migration to take place in a slightly greater degree than in the middle stratum of the peasants. This is convincing evidence that the most successful peasants do not migrate.

Western European studies.—Michael Hainisch has attempted to prove that most of the migrants became unskilled laborers or, at least, members of the lower social classes in the city. While his theory is not entirely true, it certainly argues against the doctrine that the selective force of the cities drains the rural districts of their best elements. Laur, Guillou, Vandervelde, and others show that the migrants are recruited from the following

[48] M. Kubanin, *Klassovaia sutschnost prozessa droblenia krestianskikh khoziastv* (*The Class Nature of the Process of Division of Peasant Enterprises*), Moscow, 1929, pp. 43–46. See also P. Kidaloff, "Socio-organic Processes in Kursk Province," *Sputnik Bolshevika* (Russ.), 1926, No. 9; V. T. Dobrovolski, "Economic Differentiation of Peasants," *Nashie Khoziaistoo* (Russ.), 1925, No. 1; Statistical Yearbook of the U.S.S.R., 1924, p. 119; J. Philoppoff, "Fundamental Problems of Differentiation of the White Russian Village," *Sovietskoie Stroitelstvo,* 1927, No. 1; A. I. Khriascheva, *Peasant Households According to the Censuses of 1899–1911* (Russ.), Tula, 1916, Vol. II; N. N. Tschernenkoff, *K kharakteristike krestianskago khosiaistva* (*Characterization of Peasant Economy*), Moscow, 1905, I, 12 ff.; M. J. Fenomenov, *Sovremennaia derevnia* (*The Contemporary Village*), Leningrad, 1925, I, 109 ff. See also the paper of Kavraiski and Nusinoff in chap. viii of this work and the Statistical Yearbook of the U.S.S.R., 1927, pp. 64 ff. Several of these studies, such as that of Fenomenov, pp. 148 ff., show further that the health and vitality of the more successful classes of peasants, who migrate less, is much better than that of the poor strata of peasants, who migrate more to the cities. See Fenomenov's reading in chap. x.

economic classes in rural life in descending order: unskilled laborers and owners of large tracts; tenants; skilled laborers and foremen; small owner-operators; large owner-operators. They show, moreover, that among the landed classes at least one member of the family stays on the farm to inherit the land. Many of the other children of these owner-operators migrate to the cities, remain there until they accumulate a certain amount of money, and then return to purchase a piece of land. In the face of these facts, it seemed rather difficult to argue that a selective force is exercised by the cities.[49]

Minnesota studies.—It was assumed conditionally that economic groups of different sizes represented, on the whole, different innate abilities; that these differences could be measured by arranging the income groups in units of one thousand dollars or more; that in any group of farmers the percentage of the population consisting of children 18 years of age or over represented the number of chances in 100 that that group had of contributing migrants of any specific class or type; and that failure of the migrants to fill any given type of position or contribute to the population of the community in proportion to the percentage of children over 18 years old was evidence of positive or nonproportional selection (if such difference were greater than three times the standard error of the sampling). The following conclusions were drawn:

1. Children of successful farmers stay on the farms more often than children of the less successful (and less competent) farmers.
2. When children of the successful farmers do migrate to urban communities, they rise more rapidly into the upper classes, whose members are not wage earners, than do children of less successful farmers. This fact confirms the theory that they have more ability.
3. Large industrial centers are greater agencies for nonproportional selection than are towns and villages.

Later the 15 per cent of the urban families who had left the city to become agriculturists were added. In order to estimate the rural gain or loss in natural ability, all migrants to and from the agricultural class were ranked according to their position on the urban social ladder—as laborers, clerks, business men, or pro-

[49] See the readings from the works by Hainisch and Laur, Nater, and König, below, which give data and references; Jean Guillou, *L'émigration des campagnes vers les villes*, pp. 129 ff.; and Émile Vandervelde, *L'exode rural et le retour aux champs*, Paris, 1903, pp. 26–27 ff.

fessional men—and a net balance was struck for agriculture. The hypothesis was that a loss of 40 unskilled laborers, when these were replaced by 20 other unskilled laborers and 20 recruits from the business, professional, or higher urban classes, represented a social gain. In one study, 86 migrants from farms were unskilled laborers and 37 migrants from the city who came to take their places came from the homes of unskilled laborers; the net loss to the country was therefore 49 unskilled laborers. Similarly, there was a loss to the country of 38 in the professional class, at the other end of the social ladder. The country had a slight advantage in recruits from the middle class. Fewer persons who left the country became members of the middle than of either the higher or the lower class. On the basis of these figures, the following law of rural-urban social selection was formulated: The cities attract the social extremes and the farms attract the mean strata.

These conclusions reveal the fact that average types of persons tend to stay in agriculture, whereas, on the whole, the highly competent and the extremely incompetent tend to go to the cities. That is, the urban Pied Piper is drawing away the children having the greatest and the least natural ability.[50]

Selective migration among negroes in the United States.—The problem of migration among negroes has been very popular in recent years. Among others, Carter G. Woodson attempts to prove that migrants represent the "talented tenth" rather than a random sampling of the total negro population.[51] His observations and a few data on education lead him to assert that the intelligent negroes are leaving the South very rapidly. Yet his theory is contradicted by his own data, which seem to indicate that the social rank of negroes in the North, where certainly more opportunities are open to them than in the South, shows practically the same distribution, ranging from domestics and menials, of whom the proportion is high, to successful persons in the upper classes, of whom there are a small number. Furthermore, the fact must be considered that negro tenancy in the South

[50] For a summary of the Minnesota studies, see Carle C. Zimmerman and his collaborators, O. D. Duncan, Fred C. Frey, Lynn Smith, and John J. Corson III, in the *American Journal of Sociology,* Vols. XXXII, XXXIII, and XXXIV, the *Journal of Farm Economics,* October, 1928, and *Social Forces,* March, 1930. See also the Publications of the American Sociological Society, XXIII, 104–115.

[51] Carter G. Woodson, *A Century of Negro Migration,* Washington, 1918, chap. viii.

is decreasing as fast as negro farm ownership, or faster, and that the migration seems to be proportionately greater from the tenant class than the owner class. Unless some more substantial evidence is uncovered, the contention that there is positive selection among negro migrants will remain without foundation.[52]

A summary of the studies of migration in which income, wealth, social status, and other economic indices of quality are used leads to conclusions similar to those drawn from the group of studies of physical traits and vitality. Protracted investigations concerning many countries were pursued over a period of years by highly competent investigators and ought to establish proof of positive selection if it exists. In spite of the assertions of many of these authors, however, the conclusion seems on the whole to favor random migration, or the migration of both social extremes, rather than of the talented tenth to the partial or total exclusion of others. In the same way, the economic theory provides for either a random or a positive selection, but on the whole favors chance selection. The theory that the more aggressive farmers go to the city in search of higher incomes is counterbalanced by the theory that less efficient farmers fail and are forced to leave agricultural for other types of work. Farmers who are successful remain; those who are unsuccessful migrate.

6. *Intelligence.*—Rural and urban intelligence, although long a controversial topic, is a subject upon which it ought now to be possible to arrive at the approximate truth. Let us consider first the theory of the superior intelligence of the dolichocephalic (long-headed) blond or Nordic type, and the correlation be-

[52] Negro migration seems to be similar to that of the European peasant. When he can secure a piece of land he tends to stay on the farm. For special details as to negro migrations see Charles S. Johnson, *The Negro in American Civilization,* New York, 1930, chaps. ii, iii; Woodson, *op. cit.;* Thomas J. Woofter, *Negro Migration;* Henderson H. Donald, *The Negro Migration of 1916–1918,* Washington, 1921; Emmett J. Scott, *Negro Migration during the War;* W. E. Burghardt Du Bois, *The Negro,* New York, 1915; Clarence H. Poe and others, "Lectures and Addresses on the Negro in the South," University of Virginia, 1915; Katharine Coman, *The Negro as a Peasant Farmer;* Carl Kelsey, *The Negro Farmer,* Chicago, 1903; *The Southern States,* United States Census of Agriculture, 1925, Part II; Abstract of the Fourteenth Census of the United States, Fourteenth Census of the United States, 1920, Vol. II; United States Bureau of the Census, *Negro Population 1790–1915,* 1918; William O. Scroggs, "Interstate Migration of Negro Population," *Journal of Political Economy,* Vol. XXV (December, 1917); Sadie T. Mossell, *The Standard of Living among One Hundred Negro Migrant Families in Philadelphia,* Annals of the American Academy of Political and Social Science, Vol. XCVIII (November, 1921); other studies of American negro migrations in several volumes of these Annals, especially Vols. XLIX, 1913, and CXL, 1928; and the Negro Yearbook, a publication of Tuskegee Institute, Tuskegee, Alabama.

tween the occurrence of this type and the tendency to migrate. Prominent among those who support the theory of Nordic superiority are Georg Hansen, Otto Ammon, Georges Vacher de Lapouge, Rodolfo Livi, and William Z. Ripley. Of lesser prominence, Durand de Gros, Paul Jacoby, Beddoe, and Oloriz, as well as many others, have been among its advocates. This theory was disproved by two mutually contradictory studies. First, Rudolfo Livi and others explained rural-urban differences in color and cephalic index—the former difference, it should be added, has now been shown not to exist, at least in so far as greater blondness in the country than in the city is concerned—without reference to selection. (See chapter xvii.) Secondly, many investigators found no relationship between pigmentation or shape of head and intelligence.[53]

Another set of theories was inaugurated when, more recently, a group of students came forward with the hypothesis that differences in certain mental diseases, particularly feeble-mindedness, proved absolutely that the more intelligent rather than the dullards migrated to the cities. This belief was particularly popular in the United States after the introduction of the Simon-Binet tests into this country by Henry H. Goddard and the publication of genetic studies on the Jukes and the Kallikaks. These studies of feeble-mindedness were responsible for the belief that insanity was frequent among farm people, especially farm wives. The argument was that a farm woman seldom saw her husband except when he was eating, sleeping, or indulging sexually. She had no intellectual outlet, and as a result she did the "only thing a decent woman could do under the circumstances, namely, go insane."[54] The development of the American version of these

[53] See the works of Hansen, Ammon, Vacher de Lapouge, and Livi, cited; William Z. Ripley, *The Races of Europe,* chap. xxi; Paul Jacoby, *Études sur la sélection dans ses rapports avec l'hérédité chez l'homme,* 2d ed., Paris, 1904. The reading from Vacher de Lapouge in chap. xvii summarizes the studies by Durand de Gros, Beddoe, Oloriz, and others. See also Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* pp. 132–140. The reading from Rodolfo Livi is given in the chapter on the physical or bodily characteristics of the rural and urban populations. Karl Pearson's coefficient of correlation between intelligence and color of eyes and hair is only from .058 to .09; the results obtained by other investigators of the relationship between intelligence and cephalic index are similar (*r=from* .0049 to .06). See Karl Pearson, "Relationship of Mind and Body," Annals of Eugenics, I, 382–406 (1926); J. R. Musselman, "On the Correlation of Head Measurements and Mental Agility. Women," *Biometrika,* XVIII, 195–206 (1926); G. E. Harmon, "On the Degree of Relationship between Head Measurements and Reaction Time to Sight and Sound," *ibid.,* pp. 207–220.

[54] Edward J. Menge, *Backgrounds for Social Workers,* Boston, 1918, pp. 81–82.

intelligence tests was followed by a deluge of rural-urban comparisons, practically all of which seemed to show that the children of the city were brighter than those on the farm. Hornell N. Hart estimated that he could actually measure the decline in the course of a single generation in the native ability of the rural population as a result of migration.[55] Since that time students of the intelligence of migrants have used all types of intelligence tests and have at last come to the conclusion that these tests measure for the most part secondary types of experience that are more familiar to urban than to rural children. Tests based upon generalized types of experience such as fall more within the *Gestalt* of rural than of urban children revealed conspicuous differences that favored rural children and reversed the conclusions. Comparisons of the results of the tests with those of other measures of intelligence brought out inconsistencies that cast doubt upon the validity of the results of the tests. Finally, Sorokin and Zimmerman brought together the results of studies of mental disease and feeble-mindedness and showed that insanity was almost always higher in the city than in the country and that data of studies of the feeble-minded, when standardized according to age and sex differences, showed little difference between the city and the country.[56]

In addition to these studies in intelligence testing there are in the field a number of studies of the social origin of men of fame or genius. These investigations seek to measure selective migration by comparing the rates for the two populations as to their ability to furnish great leaders, men of science, men of letters, and successful candidates included in the various *Who's Who* lists. Such famous early investigators as Alfred Odin, Alphonse de Candolle, Lester F. Ward, Charles H. Cooley, Francis Galton, Havelock Ellis, Paul Jacoby, William J. Spillman, and Frederick A. Woods concluded in general that the cities furnished a larger proportion of great men than the rural districts. This fact was taken as evidence that intelligence declined in the country and that migration to the cities was based upon selection in favor of intelligence. In later investigations, however, Stephen S. Visher,

[55] See Hornell N. Hart, Louis I. Dublin, and others, *Population Problems,* New York, 1928.

[56] Sorokin and Zimmerman, *op. cit.,* chaps. x and xi, and chap. xx of this *Source Book,* especially the reading from the study by Myra E. Shimberg.

Fritz Maas, Fritz Giese, J. McKeen Cattell, Yenjiro Awaji, Elmo H. Lott, Pitirim A. Sorokin, and Carle C. Zimmerman have furnished very detailed studies of standardized data and added critical analyses, with the result that it now seems evident that the ability of farmer-peasants to produce great leaders is not declining. Standardization of the data according to occupation gives the rural groups a higher place than the lower classes, the laborers and artisans, in the cities. Standardization according to occupational classes and according to age and sex groups discloses the fact that large cities have lower rates of productivity than rural districts. On the whole there is no clear proof of positive selection.[57]

One group of studies, not included in the preceding summary, gives data as to the educational achievement of the rural-urban populations and the significance of these data for selective migration. A summary of the results of some of these studies and a discussion of what they really prove are given below.

7. *Educational achievement and selective migration.*—A recent study that deserves discussion is the one by Smick and Yoder, who computed the average grades of all persons who took the eighth grade (grammar school) standardized state examinations, which they regarded as measures of innate ability.[58] The table below shows the results of this investigation, in which "The records extended over a period of 20 years and included 213 persons who had remained on the farm and 104 who had left the farm."

AVERAGE GRADES RECEIVED BY MIGRANTS AND NONMIGRANTS TAKING THE EIGHTH-GRADE EXAMINATION IN THREE COUNTIES IN WASHINGTON

COUNTY	PERSONS REMAINING ON THE FARM		PERSONS LEAVING THE FARM	
	Number Tabulated	Average Grade	Number Tabulated	Average Grade
Columbia	57	83.93	34	83.48
Kittitas	88	85.16	21	84.32
Skagit	68	87.52	49	84.50
Whole group	213	85.58	104	84.13

[57] Sorokin and Zimmerman, *op. cit.*, chap. x, and this *Source Book*, chap. xx, especially the readings from the works of Giese, Awaji, and Maas.

[58] A. A. Smick and F. R. Yoder, in the Washington Agricultural Experiment Station Bulletin No. 253, 1929.

The conclusions of the authors follow:

In Columbia County the average grade for the persons remaining on the farm was slightly higher than for those that had left. In Kittitas County there was a difference of almost one per cent and in Skagit County the persons that remained on the farm had an average grade almost three points higher than those that had left the farm. The total average shows that the group that remained on the farm was in the lead by more than one point.

This evidence shows that the boys and girls of these three communities who enter high school and college and train themselves for some other profession and then, having the opportunity, leave the farm, are not necessarily the brightest group on the whole. If those who remained on the farm had gone to high school and college they would doubtless have made just as good a record as those who attended these institutions. As was shown in a previous section, it is the boy and girl from the better situated homes, judging by home conveniences and luxuries, that leave the farm. This, however, may not mean that they are the most intelligent. The evidence from these three rural communities indicates that there is no reason why we should be pessimistic about the future of the rural communities. As well-equipped high schools come into all the rural communities and a college education becomes available to more and more young people who remain on the farm, the evidence seems to indicate that, other things remaining equal, the quality of our rural communities will not suffer in the future from the migrations of farm folks to the city.

These findings, based upon the educational achievements of migrants and nonmigrants, are particularly significant in view of the general fact that it has become customary to consider total education of the migrants and nonmigrants as a measure of selection. Students of migration quote statistics at length to show that a high percentage of persons who have attended high school and college leave the farm. Gee and Corson make a typical statement that [59]

A comparison of the educational training of the nonmigrants with that of the migrants . . . shows the nonmigrant group in poor light. Only 3.5 per cent of the nonmigrants graduated from college as com-

[59] Wilson Gee and John J. Corson III, *Rural Depopulation in Virginia,* pp. 70 ff. For other studies with data on education as evidence of migration and selection see especially: Charles E. Lively and P. G. Beck, Ohio State University Agricultural Experiment Station Rural Sociology Mimeograph Bulletin No. 4, July, 1928, pp. 25 ff.; No. 5, pp. 17 ff.; E. C. Young, in the Cornell University Agricultural Experiment Station Bulletin No. 426, 1924, pp. 34 ff.; Carle C. Zimmerman and Lynn Smith, "Migration to Towns and Cities," Paper No. 5, *American Journal of Sociology,* XXXVI (July, 1930); Elmer E. Jones, "A Study of Some Exceptional High School Pupils in

pared with 6.7 per cent of the migrants. In all, 11.7 per cent of the migrants attended college as compared with 7.9 per cent of the nonmigrants. Of the migrants 23.5 per cent more continued their education beyond the elementary grades as compared with 22.0 per cent of the nonmigrants, while 64.8 per cent of the migrants completed their educations in the elementary schools as compared with 69.9 per cent of the nonmigrants. Rather uniformly, these data indicate a selective migration distinctly in favor of the city.

Many of the comparisons of the education of migrants and nonmigrants are more or less misleading, for different occupations require different degrees of formal education, and migration in itself is one causal factor in education. There is a tendency to consider education largely as the one great causal factor in migration; those who are more capable and can receive more mental food migrate to the cities where there are more opportunities. Cause and effect may be reversed, however, in this as in many other cases, and persons who have migrated, or who intend to migrate, may seek more education because of its greater accessibility in the city or because they believe that their need for it will be greater in the city than in the country. If this is true, ability to receive education loses a part of its importance as a selective factor. We are not denying that those with more ability do better in educational institutions than the less competent, on the average. We do assert, however, that of two persons having the same innate ability, one of them, because of the size of the family, his age in relation to the other children, his sex, personal aptitudes, or personal preferences, may choose to migrate to the cities and there obtain more education, while the other remains on the farm. When this fact is appreciated, it becomes clear that the importance of education as an index of innate ability is very limited.

Several facts tend to support the point of view presented here. First, the general tendency in America, where most of these educational studies of migrants and nonmigrants have been made, is for the farm women to obtain more education than the men and

Illinois," *The Illinois School Survey,* Springfield, 1917, pp. 238–276; Charles Deich and Elmer E. Jones, *A Study of Distinguished High-School Pupils in Iowa,* United States Bureau of Education Bulletin No. 46, 1923; Fred C. Frey, Some Selective Phases of Rural-Urban Migration, unpublished doctor's thesis, University of Minnesota, 1929; and the entire bibliography to chap. xi of Sorokin and Zimmerman, *op. cit.* Not all (see Young, Frey, Lively, and Beck) contend that differences in education mean differences in ability or positive selection.

for a higher proportion of the former to migrate to the cities.[60] This fact does not, however, entitle the investigator to conclude that the farm women are innately superior to the farm men.

We must not assume, moreover, that any large group of siblings selected for a third characteristic, such as order of birth, sex, or size of family, are any more competent innately than the siblings who remain on the farm. Several studies reveal that older brothers remain more often on the farm than younger ones and receive less formal education than the latter, who plan to leave the farm and go to the city, where they will need more formal education in order to earn a living. Dr. Fred C. Frey in a study based upon 1,950 students who matriculated at the University of Minnesota in the fall of 1926 disclosed that the parents of students coming from farms completed their education in the following types of schools:[61]

Schools Attended by Parents of Students Matriculating at the University of Minnesota in 1926

Type	All Fathers	Farmer Fathers	All Mothers	Farmer Mothers
Elementary school	33.6	74.6	41.3	61.4
High school	48.2	21.9	50.3	32.6
College	18.2	3.5	8.4	6.0

In other words, the education of parents who were not farmers exceeded that of parents who were farmers. This fact means that formal education was much more common in the urban than in the rural population. Of all the students coming from the agricultural class, only 4.3 per cent intended to take up farming as a career. Yet these students had on an average 1.54 older brothers, 44.5 per cent of whom were farmers. The older brothers of the farm students had on the average only 10.8 years of formal schooling as compared with 12.4 years for the older brothers of all students. The older sisters had about the same amount of

[60] See Eustace E. Windes, *High School Education of the Farm Population in Selected States,* United States Bureau of Education Bulletin No. 6, 1925; E. A. Willson, in the North Dakota Agricultural Experiment Station Bulletin No. 22, pp. 23 ff.; Deich and Jones, *op. cit.;* Ellis L. Kirkpatrick, *Attitude and Problems of Farm Youth,* United States Department of Agriculture Extension Service Circular No. 46, 1927, pp. 6 ff.; Frey, *op. cit.;* and others.

[61] Frey, *op. cit.,* pp. 37 ff.

schooling. Students leaving the farm to go to college, in a high percentage of cases, left behind them older brothers and sisters who had had less education and who planned to continue in agricultural work. There is, however, no valid reason to believe that these older brothers and sisters were less capable innately than the younger brothers and sisters who came to the university. Education is not only a measure of ability but is also a type of training for urban life. Thus a comparison of the education of migrants with that of nonmigrants has little validity as an index of native ability.

In the next line of proof, success in any other field requiring native ability is correlated with amount of education. The table below, based upon 478 Minnesota families studied in 1928, shows the average education of rural and urban children who are away from home and gainfully employed and classifies them according to the income status of the parents and the present occupation of the child.[62]

This table helps to solve the problem as to whether those with

AVERAGE NUMBER OF YEARS OF SCHOOLING OF FARM AND CITY CHILDREN CLASSIFIED ACCORDING TO THE INCOME OF THE PARENTS *

INCOME GROUP ‡	FARM CHILDREN †				CITY CHILDREN †			
	Now on Other Farms	In City Upper Class §	In City Lower Class §	Total Number	Now on Farms	In City Upper Class §	In City Lower Class §	Total Number
Lower.....	8.9	10.0	9.0	9.1	8.9	11.9	9.6	10.3
Middle....	8.5	11.0	8.9	8.7	10.4	12.3	9.9	11.1
Upper.....	9.3	13.2	9.8	10.3	8.4	13.3	11.5	11.8
All	9.1	12.0	9.0	9.4	9.2	12.5	10.2	11.0

* Without sex standardization. These are arithmetical averages.

† According to the present location of the family. There were a very few retired farmers.

‡ This classification of income groups was made by taking the net spendable incomes of the families and dividing them into thirds. All under $2,300 cash receipts formed the lower third of the farm families and all over $3,700 formed the upper third. In the cities all with incomes less than $1,380 formed the lower group and all above $2,760 formed the upper. Urban incomes are net family incomes, and rural incomes are farm cash receipts. These may not be added together for a distribution because they are different items. However, if our hypothesis of chance selection is true, the income groups are comparable as far as native ability is concerned.

§ The lower class was defined as including all wage earners, and the upper as including all others. This seemed the best possible classification of the data.

[62] Zimmerman and Smith, *op. cit.*

more formal education who are migrating to the cities represent the innately superior in intelligence. It gives a measure of the general ability of these persons based upon their success in economic life. The classes listed under "income group" may be considered as representing several degrees of average native ability. With this fact in mind we may observe that children from all economic groups who remain on farms or go to live on farms have received less formal education than children who go to or remain in the city, including even those whose eventual level is the urban lower class. The one partial exception concerns children of the urban middle class who are now wage earners. These data introduce a grave and important objection to the assertion that education in itself may be used as a measure of the quality of migrants. Farming is a matter of direct experience, even in these days of science. The point to be remembered is that formal education is a less valid measure of the qualitative differences between farmers and the urban classes than it may be of the differences among the several urban classes.

In view of these facts it is clear that one ought not to give much credit to the studies that use education as a qualitative measure of migrants and find "dysgenic" selection.

Additional proof as to the invalidity of educational achievement as a measure of the selectivity of migrations is disclosed in the reading from Ricardo Bachi in the section on rural-urban intelligence. In Europe, where his data were collected, the situation is not materially different from that in the United States. Persons who intend to stay on the farms or who live in rural districts have less opportunity to get an education and have less need for formal schooling than those who have left the farm to go to the cities or who plan to leave. The educational differences between the two populations in Europe are even greater than in the United States. Consequently it is not permissible to use data as to the number of grades in school completed by the migrants and nonmigrants, by the city and country youth, as evidence of the selective rôle of migration and the higher intelligence of the city populations.

Without giving further details as to these numerous studies of selective factors in migration, based upon various measures of intelligence as indicative of the quality of the population, we

may say that the same conclusions are reached in these studies as were reached by other investigators whose work has been discussed. Although the subject has certainly been studied extensively by noted social scientists, the results furnish no clear proof of selective migration. They seem, on the contrary, to indicate nonselective migration.

II. CONCLUSIONS

1. *Selectivity of migration.*—An attempt has been made to cover systematically all reasonable proofs, evidences, and results of the selective force exercised by cities. A résumé of the most probable results and conclusions follows.

(a) Urbanization and ruralization are selective according to age. Such a selectivity has important sociological significance for those types of behavior known as "urban" or "rural."

(b) Urbanization and ruralization are selective, on the whole, according to sex. This type of selection varies more than age selectivity, but it also has important effects upon "rural" and "urban" behavior.

(c) There is no valid evidence that migration to the cities is selective in the sense that the city attracts in a much greater proportion those who are physically, mentally, morally, or socially superior or possessed of greater vitality, while the inferior individuals remain in the country. Neither is there evidence that the reverse is true, for the net migration to the cities is unselective in these respects.

(d) In innate characteristics of all kinds the urban and rural populations are on the whole similar. The influence of innate differences—if these exist—in creating differences in social structure and behavior is insignificant.

(e) The most probable causes and explanations of rural-urban differences in behavior are found in sex and age factors. The composition of the populations, the greater heterogeneity of the city population, and numerous important features of the urban and rural environments are discussed in this work. These studies lead us to affirm that, contrary to the general opinion, the net urban selection is on the whole chance selection. It is probable that the city selects the innately talented persons from the rural districts about as often in proportion to their numbers in the population as it attracts dull or mediocre persons. The accumu-

lated data permit no other conclusion, in spite of the popularity of theories of selection.

One of the implications of the conclusion here presented is the collapse of the theory that as cities develop the best elements are being drained from the rural population, and that sooner or later this movement will destroy the country population completely. It is possible that such a disaster does occasionally befall a community, but the data show that such a chance occurrence cannot be erected into a general law. It is true that the cities, as a result of differences in the birth rate in different classes, waste their best citizens, persons in the upper classes and men of genius and talent. Afterward they must be replaced by recruits from the lower classes, and in this way the upper classes in the city consume the talented and best of the lower classes. This process may even go so far that the city, having exhausted the best human fuel, begins to feel its loss. Yet such a condition does not necessarily mean that the best human fuel is exhausted from the rural population also. Cities may rise and fall, but as long as the rural hinterland remains, regardless of the destiny of the city, it may continue to have as great a proportion of innately superior persons as it had before urbanization. The progress or decay of the city and of urbanized countries, when conditioned by an increase or decrease of the best human material, does not necessarily entail a corresponding increase or decrease of this best human material in the rural population or in rural countries. The data allow us to conclude that since the net migration to the cities is not selective, the curves of such an increase and decrease in the populations of the city and the country may be independent or but remotely related. Theories of the rise and decay of society based on the probability of the occurrence of men of talent in the rural hinterland must be corrected to conform to these findings. An attempt will be made to show later that a very high degree of urbanization may lead to the decay of a society. But the conditions under which such a danger arises have very little to do with positive selection by the cities and the consequent exhaustion of the best human material in the rural districts.

2. *An explanation of chance selection.*—It is essential to explain the theory of net chance selection.

The first important factor in net chance selection concerns the economic conditions of the city and the country, conditions that, if we omit the greater fertility of the agricultural classes from consideration for the present, are primarily responsible for migration to the cities. As is shown in other chapters, particularly in chapter xxi, the economic organization of an agricultural society differs greatly from that which prevails in the cities. One difference is that the typical rural occupation often necessitates that a man be at once a laborer, a skilled artisan, a capitalist, an entrepreneur, and a manager. On the other hand the social classes of the city are clearly differentiated; some are entrepreneurial, some are capitalistic, some are skilled, and some are unskilled or manual. Fitness for any occupation, moreover, is a factor in selecting persons for that occupation. For this reason, clearly, the cities with their wide variety of occupations attract not only the capitalist, the entrepreneur, and the highly skilled technician or artist, but also the common laborer, the dullard, the inefficient person, and the man or woman who does not possess the combination of characteristics, whether innate or acquired, essential for success in agricultural pursuits. That is, a logical analysis seems to indicate that desire or ability to engage in a specific occupation attracts various types to the city, and probably in about the same proportion as these types exist within the general population. There are reasons for believing that there are fewer geniuses or even of men having special ability in a given field in the general population than there are men of lesser and unspecialized ability. The great mass of the population, obviously, does not possess that special talent or combination of talents that pushes a man to the pinnacles of the social pyramid.

The city as an economic and social organization offers some employment to a few men of genius, more to men of lesser ability, and most to the men who can fare best under the supervision of others—the common masses. It is logical to suppose, therefore, that the economic order in the city, by offering opportunities all along a long social ladder, attracts all types of persons to the city in numbers not greatly out of proportion to their distribution within the general population.

On the other hand, agriculture and the social life of the country selects persons especially fitted for rural occupations. Natural

conditions, the soil, and the occupation of farming itself offer the children of farmer-peasants gratification of their desire to exercise executive ability or the rights of capitalistic individualism, or to perform some work that appeals to their creative senses, or perhaps merely to reap some return from the mere expenditure of physical energy. But the country, unlike the city, offers the farmer-peasant child no great variety of positions on the social and economic ladder; it offers only a few positions, each of which requires a combination of characteristics, of which some lead to greatness and some to failure in the city. In so far as fitness for the occupation is concerned in the selection of the farmer-peasant of the next generation, agriculture will make its appeal to a variety of traits. It cannot be asserted that agriculture, in the long run, selects any one type. It must be borne in mind, in any attempt to estimate the importance of fitness for given positions as a factor in migration, that there are excellent logical reasons for believing that chance selection operates in a high degree in both agricultural and urban work.

Another important factor in determining the quality of the migrants to the city and the country is the farm family itself, considered in its agricultural, natural, and national setting. The farm family is a strongly knit agricultural organization producing the greater part of the future population, whether rural or urban. The farm family, because of its immobility, its attachment to a piece of soil or a family shrine, and its position as a closely knit social entity, consisting of husband and wife and children, is unquestionably an important factor in deciding the future occupations, characters, and lives of its children. The farm family seeks to perpetuate itself in its native home.

As a result, we should expect to find that it perpetuates itself (blindly and irrationally from the human standpoint, but rationally and practically from the standpoint of self-preservation) by planning that the older children, especially the male children, shall remain on the farm. If this is what occurs, it must occur among the upper or more talented agricultural classes as well as among the middle and lower, or less talented, classes. Let us look at a few samples of the agricultural population to see whether the oldest male child or the oldest child of either sex more often

inherits the farm than the other children. Studies of order of birth as a factor in agricultural succession are recent and few in number. Zimmerman and Smith, however, have studied migrants in Minnesota and Zimmerman and Corson have studied seven samples from twelve counties in Virginia.[63] From the previous studies of rural-urban differences we should expect that any purely rural characteristic would be represented rather meagerly in the northern sections of the United States, in a greater degree in the southern and but slightly urbanized sections of the United States, and still more in the countries of eastern and southern Europe and Asia where little urbanization has taken place. Accordingly, it should be expected that minor differences in favor of the succession of the first-born child to the farm would be found in the state of Minnesota and greater differences in Virginia. If this is found to be true, then we must admit that such a tendency gives some indications of being general and constant in rural-urban selection.

This is precisely what is found. The statistics for the first group of 1,415 male children in Minnesota show that 81.2 per cent of all first-born males were still engaged in agriculture, as compared with the 76.5 per cent of all males at least twenty-five years old in these families who were engaged in agriculture. In another Minnesota group, including not only families then located in agriculture, but also an equal number located in two cities (15,000 and 50,000 in population, respectively) 50.4 per cent of all first-born males were engaged in agriculture as compared with 37.8, the percentage of all male children who were so engaged. The proportions of first-born males on farms were about equal in the three major economic classes, lower, middle, and upper.

Secondly, the data include 164 white and 111 negro families residing on farms in certain rural areas of Tidewater and Piedmont counties, Virginia.[64] In this group were included 734 white persons and 573 negroes, males and females, all of whom were adults at least twenty-five years of age. The table below gives the percentages of first-born or oldest children and of all children now living on farms.

[63] Zimmerman and Smith, *op. cit.;* Carle C. Zimmerman and John J. Corson III, "Migrations to Towns and Cities," *Social Forces,* VIII, 402–408 (March, 1930).

[64] Original data were recomputed from Gee and Corson, *op. cit.*

PERCENTAGES OF CHILDREN OF VARIOUS SOCIAL CLASSES ENGAGED IN AGRICULTURE, IN TIDEWATER AND PIEDMONT COUNTIES, VIRGINIA *

SOCIAL CLASS	ALL CHILDREN NOW ON FARMS	ALL FIRST-BORN CHILDREN NOW ON FARMS	FIRST-BORN MALES NOW ON FARMS	OLDEST MALES NOW ON FARMS
All whites	58.0	65.2	69.7	73.8
Class 1	53.0	62.5	70.7	76.3
Class 2	60.8	74.6	75.9	78.9
Class 3	53.0	62.5	60.0	64.5
All negroes	43.5	60.4	54.9	62.5
Class 1	44.1	64.4	55.8	64.7
Class 2	43.0	55.8	54.0	60.0

* Single-child families omitted. Class 1 generally may be characterized as including the large landholders, in the majority of cases descendants of the plantation operators. Class 3 is made up of tenants, usually share tenants. The intermediate class, Class 2, contains the average farmers, or those who fell into neither of the above groups. The negro families are divided into two classes only, farm owners and tenants.

The third set of data was based upon a group of 77 families residing in Bedford and Culpeper counties, Virginia, and included 307 individuals, male and female, all of whom are now adults at least 25 years of age, for whom the present residence and occupation is known. The results are given in the table below.[65]

PERCENTAGES OF CHILDREN OF VARIOUS ECONOMIC GROUPS ENGAGED IN AGRICULTURE, IN BEDFORD AND CULPEPER COUNTIES, VIRGINIA †

ECONOMIC GROUP	ALL CHILDREN NOW ON FARMS	ALL FIRST-BORN CHILDREN NOW ON FARMS	FIRST-BORN MALES NOW ON FARMS	OLDEST MALES NOW ON FARMS
Upper	56.9	46.8	54.5	55.5
Middle	45.0	62.8	63.1	60.7
Lower	51.8	66.6	65.0	58.3
All groups ...	48.8	61.0	62.3	59.2

† Single-child families omitted. The three groups are divided upon the basis of living expenditures. They represent the economic groups in agriculture.

These studies were chosen by careful sampling from the rural population of Virginia. At the time they were gathered, the problem of order of birth and its relationship to rural-urban

[65] Computed from the data gathered by Wilson Gee and W. H. Stauffer for a study of family budgets in Virginia, University of Virginia Institute for Research in the Social Sciences, Monograph No. 6, 1929.

migration was not under consideration. Order of birth was recorded as one item among many others. The method of selection removed practically all possibility that any bias on the part of the investigators might affect the sample. Although there are some minor variations among the economic groups, the data substantiate the conclusions of other studies as to the influence of factors associated with order of birth as a factor in rural-urban selection. Secondly, these data, since they give constant results, as was suggested earlier (that is, with greater general rural-urban differences the influence of factors associated with order of birth becomes more marked, and differences in occupation between the first-born and the other children occur more frequently), afford us striking evidence of the scientific validity of the theory. The samples for Virginia, gathered for other purposes and at random, and samples for communities where rural-urban differences are greater generally than in Minnesota, establish the theory of order of birth as a factor in selection more incontrovertibly than does the Minnesota sample.

Finally, some additional data of significance were brought to light when Frey's study disclosed the fact that students from farms who matriculated in the University of Minnesota in 1926 had on the average 1.54 older brothers and 1.47 older sisters as compared with an average of 1.42 older brothers and 1.34 older sisters for all matriculants.[66] Of the older brothers on the farm, 44.5 per cent were located definitely in agricultural work. All but 4.3 per cent of these university students who came from farms planned to engage in occupations other than farming. These data present strong evidence for the theory that the farm family, by seeking a succession for itself in agriculture, is an important factor in bringing about chance selection rather than positive selection in choice of occupation.[67]

The influence brought to bear by the farm family has another

[66] See Frey's thesis, cited, pp. 41 ff.

[67] The partisans of positive selection may interpret this preferential selection of the oldest children for agriculture by the farm families as an unexpected support of their theories, for in contemporary literature there is a theory that the first-born child is generally inferior to younger children in the same family. Since the first-born child is inferior and since the first-born or the oldest children are retained for agriculture more often than the younger children, this means, the partisans may say, that the city migrants are composed in a less degree of the first-born or inferior children and in a greater degree of the younger or superior children, which means a positive selection. In order to prevent such conclusions we must note brifly that, first, the inferiority of

advantage over the other selective factors in that it is the first influence felt by the children and consequently too strong, in many cases, to be overcome in later years by other factors.

A major consideration in this whole problem is the fact that agricultural families have many children whereas urban families have relatively few. This fact is seen to be important when we compare the numbers of talented persons in the city and the country. Difference in fertility between the upper and the lower classes is a less important factor in the rural districts than in the city. This fact becomes clear when we consider that it often happens that when most of the members of superior rural families have migrated *en masse* to the city, the small percentage remaining on the farm produces more living representatives in the course of a generation than the much larger group that has migrated. The influence of the rural family, therefore, in its efforts to perpetuate itself on the land, is evidently an important factor in explaining why chance or random selection may logically be the principle deciding the quality of the population in rural and urban districts.

the first-born children is still a mere hypothesis that cannot be regarded as a scientifically established fact. Although Karl Pearson's study and several others have shown it, several subsequent ones have not yielded these results. Secondly, the existing studies as a whole show further that inferiority tends to increase with the fifth and subsequent children. This means that inasmuch as these younger children go in great numbers to the city, their greater inferiority (which also is not definitively proved) can counterbalance the inferiority of the first-born children retained for agriculture. Thirdly, these data disclose further that not all the first-born children are retained on the farm but only a percentage somewhat higher than the percentage of the younger children. This means that even though the data above are sufficient to show the influence of the farm family on the selection of its children for agriculture and for other occupations, they do not justify the inference of positive selection. Concerning the alleged defectiveness of the children in relation to order of birth see Karl Pearson, *Handicapping of the First-Born,* London, 1914; Harold E. Jones and H. H. Hsiao, "A Preliminary Study of Intelligence as a Function of Birth Order," *Pedagogical Seminary,* and *Journal of Genetic Psychology,* XXXV, 428–432 (September, 1928); Grace Arthur, "The Relation of *IQ* to Position in Family," *Journal of Educational Psychology,* XVII, 541–550 (November, 1926); Charles B. Willis, "The Effects of Primogeniture on Intellectual Capacity," *Journal of Abnormal Psychology and Social Psychology,* XVIII, 375–377 (January–March, 1924); H. E. Sutherland and Godfrey H. Thomson, "The Correlation between Intelligence and Size of Family," *British Journal of Psychology,* XVII, 82–92 (October, 1926); Wilhelm Weinberg, "Methoden und Technik der Statistik mit besonderer Berüksichtigung der Sozialbiologie," *Handbuch der sozialen Hygiene und Gesundheitsfürsorge,* ed. by A. Gottstein, A. Schlossman, and L. Teleky, Vol. I, Berlin, 1925, and "Über die Frage der Minderwertigkeit der Erstgeborenen," *Archiv für Rassen- und Gesellschafts-Biologie,* Vol. XII (1917); Ernst Rüdin, *Studien über Vererbung und Entstehung geistiger Störungen,* Berlin, 1916–1921; Robert M. Woodbury, *Infant Mortality and Its Causes . . .,* Baltimore, 1926; Lucien March, "Some Researches Concerning the Factors of Mortality," *Journal of the Royal Statistical Society,* LXXV, 514–520 (April, 1912).

Other important factors that contribute to the influence of the large farm family are its low mobility, its homogeneity, its lack of sophistication, and those objective elements that, combined with a love of the soil and a religious respect for tradition in the rural districts, bring about that social condition called by the economists "economic lag." That is, when this condition prevails, the economic principle that each person tends to find the place offering opportunities for his greatest productivity and embraces these opportunities (a ten-talent man with a ten-talent job, a nine-talent man with a nine-talent job, and so on) does not work out in practice as well as in theory; and it may not hold so well in town-country migrations as it does in inter- and intra-occupational shifts in the city. These factors have been called by different names—"traditionalism," "love of the soil," "custom," "ancestor worship," "family loyalty." There is no objective proof of the existence of economic lag, but the fact that practically all serious students of rural life have observed it is of indubitable importance.

Finally, we may conclude that the occupational needs of the rural and urban districts, family organization, and a series of factors classified under the general term of "love for the land" offer a logical explanation why the net "chance or random selection" is the principle governing the choice of the city or the country by persons of various types. These are the immediate causes, but there are others also, which involve the fundamental differences between rural and urban society.

C. THE MAP OF HORIZONTAL RURAL-URBAN MIGRATION

The next problem is to determine how this migration takes place. To make the process clearer a map of migration must be drawn showing the distance of migration, the causal factors underlying distances traveled, exceptions to the general rules applying to distance of migration, the causes of these exceptions, the relationships of horizontal migration to vertical circulation within the cities, and other general principles of migration.

Numerous writers—Henry C. Carey, Émile P. Levasseur, Karl Bücher, and Georg von Mayr—have tried to formulate various laws or principles explaining the migrations to cities and even to foreign countries.[68] The best of these attempts was made by E. G.

[68] See Henry C. Carey, *Principles of Social Science,* Vol. III, London, 1867, pp. 466–468; Karl Bücher, "Zur Statistik der inneren Wanderungen und des Niederlass-

Ravenstein and his followers in 1885. In careful studies for Great Britain, the continent of Europe, and America, Ravenstein furnished a considerable amount of proof for the following laws of migration.[69]

1. The great body of migrants proceed only a short distance. Consequently the universal shifting or displacement of population caused by urbanization sets up currents of migration in the direction of great centers of commerce and industry, which absorb the migrants.

2. The process of absorption proceeds as follows: The inhabitants of the country immediately surrounding a rapidly growing town flock into it; the gaps thus left in the rural population are filled up by migrants from more remote districts. In this way the attractive force of the rapidly growing cities makes itself felt, step by step, in the most remote corners of the kingdom. The number of migrants from given rural areas to a certain urban center of absorption will consequently be in inverse proportion to the distance traveled.

3. The process of dispersion is the reverse of that of absorption and exhibits similar features.

4. Each main current of migration produces a compensating countercurrent.

5. Migrants traveling long distances generally go by preference to one of the great centers of commerce and industry.

6. Natives of towns are less migratory than natives of rural parts of the country. (Here Ravenstein is using the term migration entirely in the sense of intercommunity and territorial mobility.)[70]

7. Females are more migratory than males except when the distance traveled is long or across the ocean, in which cases males predominate.

In addition to these laws or principles, Ravenstein draws some secondary generalizations and conclusions mentioned below and in the readings. A discussion of his principal theories and their validity follows.

Ravenstein's theory of long- and short-distance migrations.—Is this principle valid in general? Studies for the United States by

ungswesens," *Zeitschrift für schweizerische Statistik,* XXIII, 1–13 (1887); Pierre Clerget, *Urbanism: A Historic, Geographic, and Economic Study,* Annual Report of the Smithsonian Institute, 1912, pp. 653 ff.; Georg von Mayr, in *Beiträge zur Statistik des Königreich Bayern,* Munich, 1876, Heft XXXII; Paul M. Meuriot, *Des agglomérations urbaines,* p. 58; Émile P. Levasseur, *La population française,* II, 355.

[69] E. G. Ravenstein, "The Laws of Migration," *Journal of the Royal Statistical Society,* XLVIII, 167–235 (June, 1885); LII, 241–305 (June, 1889). The essentials of these studies are given in the readings.

[70] In chap. ii of Pitirim A. Sorokin and Carle C. Zimmerman, *Principles,* and in chap. iv of this *Source Book* there is an analysis of this "principle" that shows that Ravenstein's data do not prove its validity.

Ellis L. Kirkpatrick, H. W. Hawthorne, E. C. Young, Emily F. Hoag, Charles J. Galpin, Charles E. Lively, Carle C. Zimmerman, O. D. Duncan, Fred C. Frey, Lynn Smith, Wilson Gee, John J. Corson III, and others, attest to its validity.[71] Young has reduced the theory to an algebraic equation in which

$$\left(M = k \cdot \frac{f}{d^2} \right)$$

M is the movement of the population, f is the force of the attraction, d is the distance, and k is a constant in the equation. In essence, this equation means that the force of attraction for moving a population to the cities decreases proportionately with the square of the distance. According to this exact equation, the attraction at 25 miles would be 25 times less than the attraction 5 miles away. While this law apparently does not work with mathematical exactitude, nevertheless the equation illustrates the principle. Lively found that 75 per cent of all the migrants from Ohio whom he studied were within 100 miles of home and that less than 10 per cent were more than 200 miles away. Of the migrants who were still in the open country, 93 per cent were less than 100 miles away, and less than 5 per cent were more than 200 miles away. All Lively's studies substantiate the theory of short-distance migration,[72] and a study of the data available for Europe and Asia finds it valid in general.[73]

[71] See Ellis L. Kirkpatrick and H. W. Hawthorne, *Sources and Uses of Income among 300 Farm Families of Vinton, Jackson, and Miegs Counties, Ohio, 1926,* Preliminary Report of the United States Department of Agriculture Bureau of Agricultural Economics, 1928, pp. 16 ff.; E. C. Young, Cornell University Agricultural Experiment Station Bulletin No. 426, pp. 27 ff.; Emily F. Hoag, *The National Inflence of a Single Farm Community,* United States Department of Agriculture Bulletin No. 984, 1921; Charles J. Galpin, in Maps of Migration released by the United States Department of Agriculture; Carle C. Zimmerman, O. D. Duncan, Fred C. Frey, Lynn Smith, and John J. Corson III, in the series of migration studies collected in the Minnesota Agricultural Experiment Station Journal Series; Wilson Gee and John J. Corson III, *Rural Depopulation in Virginia,* pp. 34 ff.; Charles E. Lively, "Increases and Decreases in the Open Country Population of Ohio, 1910, 1920," *Journal of Farm Economics,* July, 1924, pp. 248 ff., and the Ohio Agricultural Experiment Station Rural Sociology Mimeographs Nos. 5 and 6, 1928 and 1929.

[72] The data given here were taken from the Ohio Agricultural Experiment Station Mimeograph Bulletin No. 5, p. 16; similar data are found in No. 4, p. 23.

[73] See the original data in the studies by Ravenstein and a discussion of these theories by William Ogle in Vols. XLVIII and LII of the *Journal of the Royal Statistical Society;* Charles H. Booth, *Life and Labour of the People of London,* 1st series: *Poverty,* Vol. III, Part I, chaps. ii, iii, and Part II, chap. iii, by H. L. Smith; Meuriot, *op. cit.,* chap. iv; and Sorokin and Zimmerman, *op. cit.* (including the bibliographies). See also Charles J. Galpin's graphic studies of the theory of short-distance migration in the mimeographed publications of the United States Department of Agriculture Division of Farm Population.

Causes of short-distance migration and exceptions to it.—The chief reason for short-distance rather than long-distance migration appears to be that migration is an adjustment made within large bodies of population. Like adjustments within other large bodies, it proceeds gradually. Secondly, migrations are expensive, and consequently most persons move to localities where they are sure that better opportunities will compensate them for the cost. Thirdly, means of communication are such that information concerning new openings ordinarily reaches people in the immediate vicinity first; they migrate to the place, and soon no opportunities are left for late comers. Fourthly, the possibilities of individual adaptation to a new environment require that these changes be gradual. So the country youth moves first to the village or small town, where the change is not so great as from the country to the city. After a year or so of adaptation he perhaps moves on to a larger place as he becomes more adjusted to the new urban environment and more sophisticated. Although there are many exceptions and although there may be other causes for this short-distance migration, on the whole these seem to be the major ones. Two types of exception to this theory must be noted. Sporadic exceptions have been due to the discovery of new lands, to the development of new cities, to changes in the economic situation within a country as a result of revolutions, famines, wars, or perhaps changes in immigration laws. Exceptions of a normal and continuous kind are found in the greater range of migration of the élite or leaders and in the greater attraction of certain very large industrial centers and port cities. Moreover, ease or difficulty of transportation is involved. Persons living along waterways or having cheap methods of transportation often travel farther in search of work or opportunities than others not so fortunately located.[74]

The preponderance of females in short-distance migration and of males in long-distance migration.—In general, females are more numerous in short-distance and males in long-distance migrations in normal times, but unusual circumstances, such as wars, famines, and crises, and changes in the immigration regulations may disturb this law. Especially in short-distance migra-

[74] For references and proof of these statements, see Sorokin and Zimmerman, *op. cit.*, pp. 591–593.

tions to the cities is there a tendency for females to be more numerous; in long-distance migrations the reverse is true. This situation may be explained, in part at least, by the fact that migrants are actuated, for the most part, by the need of obtaining a livelihood. Although cities offer employment to women as well as to men, distant cities are difficult to reach, and for that reason, apparently, fewer females than males migrate. The factors that are responsible for the migration of females to cities explain also the preponderance of females in short-distance migrations.[75]

The law of compensation of migratory currents by countercurrents.—This theory does not mean that the countercurrent of migration always bears a certain fixed relationship to the forward current; rather it means that a current of migration is nearly always associated with some countercurrent, that consisting in part of returning migrants and in part of migrants from the city to the country. The migration representing a return of the previous emigrants is composed both of migrants who have achieved their purpose in migrating and of migrants who have failed in the new environment. Those who achieve their purpose and return include migrants who have made money, and who are returning home to live, old persons who are returning home to die, men who went originally to the city to accumulate enough for a first payment on a piece of land, young men who are waiting for the death of a parent or relative before coming into possession of the property, returning college students, soldiers, and other groups. Those who have failed include the sick, the disappointed, and the maladjusted.

The migrants coming from the city are salesmen, persons who come to the country for their health or to bring up their children, persons specially trained who have a particular preference for agriculture, and the many others who always accompany the extension of the city into the country in any mobile and urbanized society.[76]

These data and references establish the general validity of all

[75] See Sorokin and Zimmerman, *op. cit.*, pp. 594 ff., and references cited there. For a summary of the data for the United States see Gee and Corson, *op. cit.*, pp. 23 ff.; and for the most comprehensive statement of the problem in Europe and a clear development of the theory, see Meuriot, *op. cit.*, chaps. xxi and xxii, and Jean Guillou, *L'émigration des campagnes vers les villes,* pp. 374 ff.

[76] See Sorokin and Zimmerman, *op. cit.*, pp. 594 ff.; Meuriot, *op. cit.*, chaps. xxi-xxii; Gee and Corson, *op. cit.*, pp. 56–63; and the readings following from the works of Charles J. Galpin, in which are many other bibliographical references. See also Karl

of Ravenstein's laws except his hypothesis that residents of the cities are less migratory than residents of rural districts. As indicated above, Ravenstein's data and those presented in this work show clearly that this claim is invalid.

D. VERTICAL CIRCULATION OF MIGRANTS

The map of vertical circulation of rural-urban migrants.—The preceding discussion brings the migrants to the gate of the cities, where they are ready to enter urban society or to go out of the cities into the rural districts. The next question naturally is: What is becoming of these migrants after they pass the city gate in either direction? In the first place, what happens to rural migrants in the city? Which social stratum do they enter—the lower, the middle, or the upper? Do they become poor or rich? In what kinds of occupation do they engage? What is their eventual destiny? Do they climb higher on the social ladder or do they sink and compose the lowest class of the city proletariat and underworld? These are the problems to be analyzed. Without such an analysis our knowledge of the complex subject of migration and of the mechanism of social dynamics is quite incomplete. Unfortunately an adequate analysis of the subject of vertical circulation among the rural migrants (that is, the processes by which they rise and descend on the urban social ladder), is very difficult, for the subject has been studied very little and the necessary data are lacking. The analysis and conclusions given here, therefore, are wholly tentative.

To get at the heart of the problem, let us outline briefly the conflicting theories in this field. The first type is represented by that of Georg Hansen.[77] The other is represented to some extent by that of Ammon and Weber but more particularly by that of Kuczynski.[78] If differences in detail are disregarded, the essential

Bücher, "Zur Statistik der inneren Wanderungen und des Niederlassungswesens," *Zeitschrift für schweizerische Statistik,* XXIII, 7–8 (1887), and *Industrial Evolution,* trans. from the 3d German ed. by S. Morley Wickett, New York, 1901, pp. 350–372; Middle West Utilities Company, *America's New Frontier,* Chicago, 1929; Émile Vandervelde, *L'exode rural et le retour aux champs,* pp. 228 ff.

[77] For his analysis and data see *Die drei Bevölkerungsstufen.* See also Adna F. Weber, *The Growth of Cities in the Nineteenth Century,* and a section of Franklin H. Giddings, *The Principles of Sociology; An Analysis of the Phenomena of Association and of Social Organization,* New York, 1899.

[78] See Otto Ammon, *Die natürliche Auslese beim Menschen,* chap. xii, *passim,* and *Die Gesellschaftsordnung und ihre natürlichen Grundlagen . . . ,* pp. 145 ff.; Weber, *op. cit.,* p. 390, and *passim;* Robert R. Kuczynski, *Der Zug nach der Stadt,* pp. 95 ff.

situation is as follows. The migration from the country into the city is only the first part of the social dynamics involved; the second part is the vertical circulation of the migrants in urban society and the constant refilling by migrants of positions on various levels of the social pyramid left vacant by urbanites. The main difference between the two theories is concerned with the problem as to which strata of urban life the rural migrants enter in the course of a few years or a generation. The data that these students adduce in support of their ideas need not be presented here.[79] Instead, some conclusions that seem evident from a study of all the facts and some newer data in proof of these conclusions are presented.

(1) Migrants from rural districts to the city infiltrate into all social classes, from the top of the social pyramid to the bottom, during the lifetime of the first migrating generation.

(2) The social position of the migrants in the city depends to a large extent upon their situation when they enter the city; it is possible to differentiate, approximately, two groups of migrants and two types of careers within the city. One group of migrants, well prepared and trained for the activities of the middle and upper urban classes in universities and schools, take up independent careers in the city and consequently begin at a relatively elevated position instead of at the bottom. The other group, untrained and equipped only with a strong pair of arms, enters the lower classes. These two groups, one trained and financially sound, the other untrained and financially weak and unguided, grasp different rungs of the urban ladder and distribute themselves at different levels within the city.

(3) The question as to whether the two classes of migrants enter the lower or the upper class in higher proportions than their numbers in the population warrant, cannot be settled definitely. The fragmentary data suggest that the proportion of the rural migrants entering the lower, middle, and upper classes of the city within one generation is not materially different from the distribution of the urban population as a whole within these social strata.

(4) The rural migrant who enters the city with some preparation for the problems he is to meet there and who later becomes

[79] See Sorokin and Zimmerman, *op. cit.*, pp. 509–510, and the preceding analysis of urban selectivity.

a member of the urban upper class is differentiated from the other members of that class and from the city-bred social climbers by two primary characteristics that are the result of his having lived in a rural environment. His rise is accomplished through somewhat different mediums from those utilized by native urbanites. His philosophy and behavior in the city are more consistent and stable and less erratic than the philosophy and behavior of members of the urban upper classes and of the purely urban social climbers. Social climbers from the country who reach the upper classes of the city rise more often through the mediums of the church, the school, and politics in democratic countries; city-bred persons, both of the upper and of the lower classes, enter artistic fields, business, military life, and politics in nondemocratic countries more often than do country-bred persons. The rural migrant keeps his consistent philosophy and stable attitude towards public institutions, characteristics that reflect his early rural training. Although there are many conspicuous exceptions, these general statements seem on the whole to be valid.

With these considerations in mind, let us turn to the data, however incomplete, to discover what verification they afford.

Entrance of rural migrants into all classes.—Some rural migrants become unskilled and semiskilled laborers and even criminals and prostitutes. But others succeed in establishing themselves in the highest positions in urban society. It is sufficient to recall the fact that many presidents of the United States have been farmers' sons; that 47 of the 56 cabinet officers of the United States during the years from 1869 to 1903, 8 to 23 per cent of the multimillionaires in America, both of the present and of past generations, 41 out of 45 state governors in 1909, and 55.4 per cent of 47 railroad presidents have been farmers' sons. This condition has prevailed in other countries and in past eras; it is sufficient to say that certain rural migrants in the past became popes and Roman, Chinese, and Byzantine emperors.[80] Moreover, in chapter xx, in which rural-urban intelligence is discussed, we find that from rural migrants men of genius and leaders in all fields of human activity have been recruited. This contribution may be seen from the following studies of the rural migrants in America.

[80] See many other data in Pitirim A. Sorokin, *Social Mobility,* chap. vii and pp. 440 ff. See also the paper of Michael Hainisch in the readings. Hainisch claims that the migrants enter the lower class primarily. We do not believe this to be true, however.

One study of 700 farm families in Minnesota gives the following distribution of 275 migrants:[81]

Occupational Distributions of Migrants from Farm Families in Minnesota

Occupation Entered	Number	Percentage
Common labor	86	31.2
Skilled and semiskilled labor	99	36.0
Clerical work	28	10.2
Business	12	4.4
Professions	50	18.2
Total	275	100.0

These data reveal that two-thirds of these migrants entered the ranks of laborers and that the other third entered the middle and upper classes. Similarly, Ellis L. Kirkpatrick and H. W. Hawthorne[82] found that of 135 boys who had left Ohio farms, 45 per cent were laborers of all grades, 23.2 per cent were in public service of all types, 20.3 per cent were in professional service of all types, and the remaining 11.5 per cent were in business as proprietors or managers.

Another study is reported by E. C. Young,[83] who shows in detail the occupations of all who have left a number of farms in New York state. A rough classification of these migrants into occupational classes gives the distribution of their present occupations in towns as shown in the next table.

Other tables that follow in this publication show the present occupations of all owners and tenants who were operating farms in Livingston County, New York, in 1908, but who subsequently gave up farming to engage in other occupations. Of these, 28 became laborers, 3 salesmen, and 12 business men. Retired farmers and unemployed persons were omitted from this latter tabulation. These data show the frequency with which various types of farmers leave agriculture. Most of the farmers who gave up agriculture had failed from one cause or another and migrated to

[81] Carle C. Zimmerman, articles on migration in the *American Journal of Sociology*, Vol. XXXIII (July and September, 1927).

[82] Kirkpatrick and Hawthorne, *op. cit.*, pp. 16 ff.

[83] Computed from a study by E. C. Young, in the Cornell University Agricultural Experiment Station Bulletin No. 426, pp. 17 ff.

Occupational Distribution of Migrants in Various Towns and Cities in New York

Occupational Class in Towns and Cities	Males		Females *		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Labor (all grades from unskilled to skilled)	145	62.9	95	56.3	240	60.3
Clerical	25	10.8	26	16.1	51	12.8
Business and managerial	38	16.4	24	14.4	62	15.6
All professions from lowest to highest	23	9.9	22	13.2	45	11.3
Total	231	100.0	167	100.0	398	100.0

* Occupation of husband is given where woman is married.

the towns to become laborers or business men on a small scale. A few of them actually improved their situations by going to the cities.[84] The table given below substantiates the data in the preceding table, which show that two-thirds of the migrants enter the lower classes in cities but that others enter the upper classes.

The very comprehensive table given below summarizes the

Occupational Distribution, in Percentages, of 834 Migrants from Ten Counties in Rural Virginia

Occupation Entered	Total Group	Males	Females	White	Colored
Farm work	12.0	14.5	1.8	14.8	9.2
Other occupations	88.0	85.5	98.2	85.2	90.8
Unskilled labor	27.6	34.6	3.6	14.5	39.8
Semiskilled and skilled labor	16.6	20.7	2.4	18.8	14.6
Domestic service	21.1	8.1	66.1	1.6	38.9
Clerical work	6.7	6.7	6.7	11.9	1.8
Business	15.9	19.7	2.4	31.3	1.8
Professions	12.1	10.2	18.8	21.9	3.1
Total	100.0	100.0	100.0	100.0	100.0

[84] Only 8.4 per cent of the former operators of North Dakota farms who left these farms did so on account of a better economic outlook elsewhere. See the North Dakota Agricultural Experiment Station Bulletin No. 214, p. 55.

urban occupational distribution of 834 migrants from ten counties in rural Virginia. The group is subdivided according to sex and race.[85]

Austin B. Hill in a study mentioned above[86] gives the distribution of rural migrants from Essex, England, after they entered cities. Lively and Beck present similar data for Ohio.[87]

DISTRIBUTION OF MIGRANTS ACCORDING TO THE FIRST EMPLOYMENT TAKEN AFTER MIGRATION FROM ESSEX, ENGLAND

EMPLOYMENT	MALES Per Cent	EMPLOYMENT	FEMALES Per Cent
Shop assistant	17	Shop assistant	5
Army	10	Domestic service	61
Factory worker	5	Factory worker	3
Clerk	5	Waitress	2
Police	7	Housewife	24
Railroad	7	Miscellaneous	5
Agriculture	5		100
Miscellaneous (i. e., chauffeur, porter, mail carrier, errand boy, etc.)	48		
Engineering and mechanics	6		
Building trades	8		
Bus or street-car operator	2		
	100		

These data are sufficient to prove the first proposition. European data as given in the chapter on intelligence show that Hainisch's theory, which conflicts with the conclusion here presented, is untenable.

Two types of entrants into the urban world.—One group of migrants from the farm, educated or trained for city life or some nonagricultural career, obtains almost at once a higher position than the untrained group on the urban ladder. In all the tabulations given above, some persons are included who received this training. In addition, numerous studies of geniuses and eminent men include some persons born on farms who were well educated

[85] Gee and Corson, *op. cit.*, pp. 50, 51.

[86] Austin B. Hill, *Internal Migration and Its Effects upon the Death-Rates.* See also Booth, *op. cit.*

[87] See the Ohio State University Agricultural Experiment Station Rural Sociology Mimeograph Bulletin No. 5, 1929, p. 18.

and prepared for life and who reached the highest positions in urban society.[88]

A study of 84 farmers' sons who graduated from the University of Minnesota between 1910 and 1915 reveals that they were distributed ten years after graduation as follows: farmers, 5.9 per cent; merchants, 2.3 per cent; lawyers, 16.6 per cent; ministers, 3.5 per cent; physicians, 11.9 per cent; engineers, 5.9 per cent; teachers, 23.8 per cent; dentists, 2.3 per cent. The remainder were in various professional and commercial occupations. These graduates represent a sample of the trained and well-prepared migrants.[89] In other studies of the occupations of farmers' sons who had obtained some secondary or college education, Sorokin shows that a high proportion had entered the urban middle and upper classes and that only a small proportion had become skilled or unskilled laborers. This finding suggests that in a study of the urban careers of rural migrants it is necessary in attempting to make generalizations to keep in mind which of these two types of migrants is under consideration. A conclusion that is valid for one type may well be false for the other.

It would seem that the obstacles to the social rise of rural migrants must be greater than those encountered by urbanites; nevertheless, either this premise is invalid or the migrants work harder, for there is no evidence that they are less successful than urbanites of similar social standing and opportunities.

Rural migrants, entering a new environment, have not the opportunity enjoyed by many city-bred persons of entering their fathers' businesses and receiving preference there. In fact, the majority receive no aid whatsoever except a few years more schooling and, perhaps, a share in the estate upon the death of their parents. While it is evident that many urban children start at the bottom of the ladder, it appears that the rural migrant is handicapped in urban life more than any other beginner, for he may expect little favor or friendly help except that which he earns by his own merits or obtains from migrants, often not much better off than himself, from his own community. But in the course of a lifetime he will probably find his proper level; at any rate his children, who are likely to have about the same

[88] See Sorokin and Zimmerman, *op. cit.*, chap. xi, and other chapters of this *Source Book*.

[89] Pitirim A. Sorokin, *Social Mobility*, pp. 420, 429.

amount of ability as he, will reach the social level, whether high or low, to which they are fitted.

The distribution of the migrants in the social classes of the city.—All the data indicate that the migrants are found in the upper, middle, and lower classes of urban society in about the same proportions as nonmigrants. Studies of eminent men [90] show that the rural class has contributed a fair share of these men; their proportional contribution is no lower than that of the laboring classes, or of the bulk of the population, in which there are also opportunities to rise. What is true of the positions of greatest prominence is true also of less elevated social positions.

The city as a whole produces a somewhat larger share of this upper group than does the country, the upper and middle classes in the city contributing a very large percentage of the leaders. Since the opportunities of these classes are incomparably greater, and their children are already placed in upper and middle positions of society, it is inaccurate to compare the careers of these children with the careers of rural migrants. A comparison of the careers of the migrants with those of the bulk of the urban population, a more just procedure, shows that the migrants hold their own and, contrary to the assertions of Kuczynski and Weber, are at least as likely to rise in the world as the city-bred population as a whole. This conclusion seems more probable than any other, but it is tentative and is subject to change if new studies indicate that it is unsound. It is in closer agreement with the existing data, however, than the extreme theories of Hansen and Weber, and it agrees also with the thesis developed in the present work that random selection is involved in rural migration to the cities.

The typical channels of rural-urban vertical mobility.—A number of interesting facts may be presented to prove the first part of the fourth proposition, namely, that migrants from the country more often enter the upper classes through religious, pedagogical, scientific, and political than through other channels. R. H. Holmes in a study of the notables in *Who's Who in America* found that the following percentages of the distinguished men in each specified field of activity were born in rural districts: agriculture, 91; education, 76; politics, 75; church, 73; army and navy, 70; science, 68; medicine, 59; law, 58; engineering, 57;

[90] Sorokin and Zimmerman, *op. cit.*, chap. xi, and this *Source Book*, chap. xx.

journalism, 56; business, 54; arts, 41. Similar data are given for notables in the German *Who's Who* studied by Giese and for German men of genius studied by Maas.[91]

Several other studies show that the fields of art and business and certain others are less accessible than the professions to the farm migrants as mediums for social advancement. Zimmerman's data for Minnesota, already quoted, show that 18.2 per cent of the rural migrants entered the professional classes as compared with 4.4 per cent who entered the business class. Kirkpatrick and Hawthorne found 20.3 per cent in the professions as compared with 11.5 per cent in business. Young in his New York study, however, found 11.3 per cent in professions and 15.6 per cent in business and managerial positions. In their study conducted in Virginia, Gee and Corson found that in the South, where the professional class is relatively less numerous, 12.1 per cent of the migrants were in professions and 15.9 per cent were in business. Lively and Beck found 7 per cent of Ohio migrants to be in professions and 9 per cent to be business entrepreneurs. Sorokin's study of graduates of the University of Minnesota who were sons of farmers as compared with the graduates as a whole, based upon 407 cases for the years 1910 to 1915, found that of the farmers' sons 55.8 per cent became lawyers, ministers, physicians, and teachers as compared with 39.5 per cent of the whole group. In proportion to their numbers students from farms chose these professions from 25 to 300 per cent more frequently than did urban students. The tables show opposite tendencies among students in business, engineering, dentistry, and in miscellaneous groups. Of 248 American millionaires studied by Sorokin only 18, or about 7 per cent, were sons of farmers. On the other hand, presidents of the United States and other officials, including cabinet officers, included much higher percentages from the farm than did millionaires, business men, and railroad presidents. Spillman's study, as has already been noted, found that of 45 state governors in 1909, 41 were sons of farmers; of 56 cabinet officers from 1869 to 1903, 47 were farmers' sons; of 47 railroad

[91] Roy H. Holmes, "A Study of the Origins of Distinguished Living Americans," *American Journal of Sociology*, XXXIV, 683 (January, 1929). See also Ellsworth Huntington, *The Pulse of Progress*, chap. iv. Readings from Giese and Maas are given in chap. xx of the *Source Book*.

presidents in 1909, 55.4 per cent were farmers' sons. Sorokin[92] in his study of labor leaders discovered that farmers supplied 20.9 per cent of the highest class but only 9.4 per cent of all leaders. Of the 161 most prominent medical men in America, 41 were farmers' sons and the rest came from the professional classes. The studies by J. Philiptschenko, conducted in Russia, present contradictory data. Peasants and farmers, he found, had contributed 7.9 per cent of contemporary Russian scientists, 9.6 per cent of contemporary literati, 6 per cent of the greatest scientists of the present day, and 14.1 per cent of the greatest scientists in the 80 years preceding.[93] J. McKeen Cattell found that rural districts furnished a larger percentage of less distinguished than of highly distinguished American scientists.

Lotus D. Coffman took a random sample of 4,500 school teachers in the secondary schools of the United States in 1910. He found that 69.7 per cent of the male and 44.8 per cent of the female teachers had been brought up on farms.[94] Agriculture furnished twice as many teachers and two and a half times as many female teachers, proportionately, as it did of the gainfully employed as a whole. Coffman repeated his study in 1917, at which time he obtained data as to the orgin of 4,395 secondary school teachers in Illinois.[95] In this study he found that 30.5 per cent were children of farmers, 20.5 of artisans, 17.4 of business men, and 3.4 of unskilled laborers. The parents of 30.6 per cent resided in the country, of 18.1 per cent in towns, and of 44.5 per cent in cities. Since 55.3 per cent of the population of the state resided in the open country or in villages of less than 2,500 population at the time of the 1890 census, the results of this second study appear to conflict with the results of the first. In the school survey in Oklahoma a similar study was made, in which data were collected as to the occupational groups to which the parents of 4,754 teachers in towns of 200 or more in that state belonged. The findings showed that 1,682, or 35 per cent, came from farm homes. In 1900, 92.6 per cent of the population was classed as

[92] See the data in Sorokin, *op. cit.*, p. 441 and *passim*.
[93] Sorokin, *op. cit.*, p. 291.
[94] Lotus D. Coffman, *The Social Composition of the Teaching Population*, New York, 1911.
[95] Lotus D. Coffman (director), *The Illinois School Survey*, Springfield, 1917, pp. 28 ff.

rural; in 1920, 50.2 per cent lived on farms. These results of the Oklahoma study support the data collected in Illinois.[96]

Robert L. Kelly in his study of the origin of theological students in America maintains that a disproportionately large number of them come from farms.[97] This information would seem to show that farmers' sons are successful in the ministry. Most of these American and German studies show that education and religion are the most usual mediums through which the farmers' sons rise socially.

Further proofs are unnecessary to confirm this theory, the truth of which derives from several factors. Education and religion are connected with the schools; entrance into them requires no capital; and they appeal to the idealistic and religious nature of farmer-peasant children. These three factors seem to explain why pedagogy and the church, and sometimes the other professions and politics, are the occupations that most often enable farmer-peasants to rise in the urban world.

Stability of farmer-peasants in the urban upper classes.—It is much more difficult to demonstrate that the farmer-peasant's son who has reached the urban upper classes is more stable and consistent in his philosophy and behavior than members of the upper classes and social aspirants from other strata of life. However, a few data and a certain amount of theoretical reasoning seem to indicate that such is often the case. In the first place, the children of farmers are born in a more stable environment, one governed to a greater extent by a few consistent principles, than the children of the urban classes, and they carry some of the characteristics of their early surroundings with them when they become members of the urban upper classes. They have risen principally as a result of their own labor and energy, a fact that in itself tends to give them greater steadiness and simplicity of character than is usually found among members of the upper classes. Finally, these qualities are as a rule more valuable in the fields in which the sons of farmer-peasants achieve their success than are qualities associated with epicureanism. Proofs that the stability found among the rural classes and in the rural environment is

[96] *Public Education in Oklahoma,* Report of a Survey of Public Education in the State of Oklahoma, Washington, 1922.

[97] Robert L. Kelly, *Theological Education in America; A Study of One Hundred Sixty-one Theological Schools in the United States and Canada,* New York, 1924.

greater than that found in the city are given in the chapters on the rural family, rural culture, and the farmer-peasant class, and they admit of no question. The poverty of the rural classes and their lack of opportunities, even as compared with the children of laborers in the city, make it necessary that a high proportion of them rise through their own efforts.

It also seems logical to believe that the professions in which they engage, the ministry, pedagogy, and public service, in which the remuneration is not great in proportion to their importance, develop stability and discourage epicureanism. To some extent, stability of personality and epicureanism are reflected in the distribution of the expenditure budget. The laws or principles developed by Ernest Engel, to the effect that increases in the incomes of wage earners are associated with the expenditure of a larger percentage of their incomes on nonessentials for present consumption—items other than food, clothing, and other necessities —seem to measure this development of epicureanism and, to some extent, the increase or decrease of personal stability. We may expect, therefore, that sons of farmer-peasants, inasmuch as they frequently enter the underpaid professions—teaching, the ministry, and public service—will show less epicureanism and instability.

The children of urban migrants.—It has been suggested by various students, including Hansen and Ammon, that rural migrants, handicapped by a poor start in city life, do not find their proper level, but that their children have better opportunities. After a few generations, therefore, the descendants of rural migrants contribute to all classes in urban life in virtually the same proportions as descendants of the older families, if there are any of these in the community. That is, children of the migrants ordinarily attain a higher status than their parents. Little evidence has been adduced to prove this contention, although Ammon has assembled a few data. It remains a plausible theory, easily explained and understood in the light of this discussion, but it cannot be affirmed with any appreciable certainty. All that can be said with assurance is that rural migrants filter into all urban classes within one generation. We have really no reason to assume that the average status of those who leave agriculture is higher than that of those who remain behind or than that of the city population as a whole.

Interpretation.—This chapter shows that as soon as the rural migrant enters a city he joins in the mighty struggle for social position. In other words, horizontal and vertical mobility go hand in hand. Studies of the migrants show that all classes enter the cities and that they distribute themselves there among all the social classes. They contribute their share to the paupers, criminals, and low-class groups in urban society as well as to the upper classes. Of the fates of subsequent generations little is known.

The available data do not support the belief that migration to cities is selective of persons of superior native ability. The increase of vertical mobility accentuates the development of the characteristics mentioned below as results of horizontal mobility. The combination of these characteristics and others associated with urban life makes the population gradually assume urban characteristics. The activity involved in the phenomena of social mobility and migration is much greater than one realizes from a study of the actual number of net migrants. Net migration to a city is the result of successive short moves on the part of whole groups. Moreover, net migration compensates for reverse migration, or migration from the city to the country, which is also accomplished by several short moves. Some of the major effects of social mobility upon the characters of individuals and groups are shown in the following abbreviated summary:[98]

1. Behavior becomes more plastic and versatile.
2. Narrow-mindedness and occupational and other idiosyncracies tend to decrease.
3. Mental strain tends to increase. In short, mobile societies and groups are always changing and never satisfied.
4. Invention and discovery are facilitated. The chance for and the actual production of new inventions are increased.
5. An increase of intellectual life is facilitated.
6. An increase of mental diseases is facilitated.
7. Superficiality tends to increase and the sensitiveness of the nervous system to decrease.
8. Skepticism, cynicism, and "misoneism" increase.
9. The search for sensual pleasure is intensified; restlessness increases; intimacy decreases; and the psychological isolation and loneliness of individuals is augmented. The increase in consumption of stimulants, in the number of suicides, in divorces, in personal con-

[98] Sorokin, *Social Mobility,* pp. 500 ff.

tacts among strangers, at public dance halls, for example, lead to the conditions mentioned above.

10. The disintegration of morals is facilitated. The sections on moral behavior and crime give illustrations.

11. Shattering of the equilibrium of social structures and relationships, atomization, and diffusion of solidarities and antagonisms are increased. The difference between the social classes is less. Many individuals have passed from one to another. Blocs and antagonisms are temporary, not lasting; they appear and disappear very rapidly.

12. An increase of individualism occurs, followed by a kind of cosmopolitanism and collectivism. Individualism increases because individuals are continually breaking away from social alliances and antagonisms at so rapid a rate that nothing is fixed and little is collective. Since individuals are not associated with a group, either geographically or socially, their antagonisms and social desires take the form of a general collectivism and cosmopolitanism. They do not know to which geographic or social group they will belong tomorrow. This development is the natural concomitant of the development of a society based on secondary rather than primary relationships.

In this brief résumé of some of the results of social mobility upon personal life and social organization many of the rural and urban differences already discussed are implied. It is maintained in this study that social mobility of this kind is characteristic of society that is or is becoming urban. The first development in mobile societies is from rural to urban districts. Purely urban societies cannot, or at least do not, exist; there is a constant interchange between rural and urban populations and a reinforcement of the latter by recruits from the country. Finally, it should be borne in mind that an understanding of the processes and mechanisms of migration and urbanization, and of the social consequences of this migration and urbanization, gives the key to many of the characteristics of urban and rural societies and to the differences between them.[99]

Final summary of rural-urban migration as a phase of rural-

[99] One of the most competent studies in this field is that by Jean Guillou entitled *L'émigration des campagnes vers les villes.* Two hundred pages of this book are devoted to the economic and social consequences of migration. The author shows that in essential elements the whole process of urbanization is intimately connected with that of migration. He analyzes the economic and social advantages and disadvantages of migration both to the city and to the country. See the readings from Guillou following. His analysis of the consequences of migration is too lengthy for translation, but we have given his chief ideas in various places in this work.

urban relationships.—The country assumes the function of producing and bringing up the population, while the city offers a living to the excess rural population. Without the country the city could not carry on, while without the city the results of rural overpopulation would be devastating.

In addition, we see that the characteristics of the rural populations are carried into the city by each new generation of migrants. The spiritual and moral convictions, the habits of life, and the personal traits of the rural population, whether good or bad, are constantly being injected into the culture that obtains in the city. On the other hand, a smaller stream of migrants continues to go from the city to the country. These representatives of the city carry with them the culture and characteristics, the good and the bad of the urban centers, to the country. In the long run, the city gains more by this process than it loses.

Finally, this chapter points out that both urban and rural populations are essential to the continuance and development of society. Town and country contribute to the welfare of each other.

Additional bibliography and readings.—From the great mass of material that deals with migrations we have tried to choose a few important representative readings. These readings confirm the theories developed in this discussion. Others are summarized below in the bibliography.

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193. Jean Guillou: Historical Introduction to Rural-Urban Migrations *

Emigration from the country to the city began with the appearance of the earliest cities. The most venerable written proof and undoubtedly the oldest that certifies to us the existence of some rural emigration in earliest antiquity is this fragment in which Ulysses says to Eumea: "I am accustomed to live by my industry. The city will give me more opportunities for it than the country. There is only one means of subsisting in the country. One can hope for nothing but continual labor, to which, I confess to you, I am but little suited. In the city there are a hundred resources, and often, with a little intelligence and experience, one advances more in a short time than in many years in the country." [1]

Sparta already knew the worst form of desertion of the country, the absenteeism of the great landed proprietors who, in order to live in the cities, divided their distant property among their slaves, from whom they exacted almost half the harvest as annual rent. Aristotle also complained bitterly that the people renounced the cultivation of the soil. Plutarch, in the life of Solon, attributed the emigration to the cities to the greater security that was enjoyed within their walls. In Rome it was much worse. Among other authors, Sallust and

* From Jean Guillou, *Étude d'économie rurale et sociale: L'émigration des campagnes vers les villes et ses conséquences économiques et sociales,* Paris, A. A. Rousseau, 1905, pp. 5–12 of the "Historical Introduction." Translated and printed with the permission of the publisher.

[1] George Michel, quoted from *L'économiste français,* March 28, 1896.

Appian were so struck by this emigration, which had become a veritable depopulation of the country, that they did not hesitate to state that the abandonment of agriculture was one of the causes of Roman decadence. Everyone knows the famous words of Pliny the Elder, the cry of alarm that he uttered upon encountering the absenteeism of the great landowners of his time: *Latifundia perdidere Italiam, jam vero et provincias!*

On the other hand, one observes that as long as the Roman people kept their love for the labor of the fields they enjoyed their greatest prosperity as well as the most fortunate results in their wars. In a population given over to agriculture they found an inexhaustible source of robust and valorous warriors. The farmers, according to Cato and Pliny the Elder, were the best soldiers in the Roman legions: *Fortissimi viri et milites strenuissimi ex agricolis gignuntur, minimeque male cogitantes.*[2]

But in the course of long and painful efforts against opulent Carthage, new economic habits and new manners were born in the Roman republic. During the interminable Punic wars the Roman people acquired a taste for maritime enterprises and expeditions that were so long the object of their apprehensions and fears. We borrow from the study of Ferlet the following page, which gives us the whole secret of the abandonment of the country:

The annual contributions of the conquered provinces brought into Italy great supplies of grain, which encumbered the granaries of the state. The Roman ships, seconded by the progress of the merchant marine, plowed the central seas and threw on the market an enormous stock of grain at a lowered price. From being tillers of the soil, the Romans became, as the Phoenicians had been, the richest merchants in the world. The petty farmer was quickly reduced to misery, since the state entered into unfair competition with him instead of facilitating the sale of his products. His labor no longer gave him any profit, for the freight of the crops of Sicily or Sardinia cost less than the removal of the grain into Latium from Etruria, Campania, or northern Italy. He was obliged to abandon his land and take refuge in the obscurity of the lower-class quarters of Rome.

The competition of the state forced the large landowners to procure cheap labor. Since the work of freemen was dear, they turned to slave labor, which they obtained at a low price because of the always increasing number of prisoners of war, whom the traffickers were selling at ridiculous prices. Finally, they substituted for the cultivation of grain, which was no longer remunerative, the raising of cattle, which required fewer workers. The large domains were thus transformed into immense pastures under the supervision of bands of slaves without women and children. In

[2] Marcus Porcius Cato, *De re rustica,* chap. i, and also Pliny, *Naturalis historia,* Bk. XVIII, chapter v.

the midst of these transformations the Licinian laws became dead letters, and the Carthaginian latifundia were reestablished on Italian soil.[3]

The *ager publicus* of the first days of the republic was considerably enlarged, in proportion to the size of the conquests, by the spoils of the conquered peoples. But it was soon to be swallowed up little by little by some hundreds of usurpers and to give birth to those famous latifundia that later contributed to the fall of Italy. However, the laws of C. Licinius Stolo succeeded for a time in causing the return to the common people of some of the lands of the *ager publicus* of which they had been dispossessed by the patrician families. This dispossession afterward became still more complete; and two and a half centuries after the introduction of the Licinian laws, the petty farmers were unable to live by the work of the fields. They went to Rome in large numbers, thus increasing the ranks of a common people, who were starved, idle, and always for sale. Once the Italian lands were abandoned by the rural populations, the populace became more and more indolent and sent to Sicily, Sardinia, Africa, and Asia for grain.

To remedy this situation and at the same time to limit the usurpation of the public domain, intervention was necessary. The agrarian laws, inspired by the Gracchi, attempted to distribute lands to the poor of Rome in order to send them back to the country. We know the failure of the attempts of Tiberius and Gaius Gracchus before the faction of grandees and the violent opposition of the unjust holders of the public lands.

Analogous propositions, inspired by the same principles and situations, were reproduced thereafter at close intervals, and were likewise ineffective. Let us quote from Mr. Ferlet: "The Plautian and Servilian laws, the agrarian law of the tribune Rullus, which Cicero was able to annul by his eloquence, and the Flavian law, inspired by Pompey, likewise failed. Caesar, more successful, imbued his agrarian laws with the most profound wisdom. . . ."[4] Sulla had already tried to make farmers of his veterans and had assigned lands to them. But, as Mr. Robert Dreyfus says, "the soldier-farmer was not more faithful to his tenure than the beneficiaries of the Sempronian law had been. Almost everywhere the veterans sold their shares to the capitalists. Those who kept their concessions were soon covered with debts."[5]

Caesar profited by this example and forbade his veterans to sell their land until after twenty years' possession. The last triumvirs, Lepidus,

[3] Jules Ferlet, *L'abaissement de la natalité à Rome et la dépopulation des campagnes*, Paris, 1902, pp. 9–11.

[4] Ferlet, *op. cit.*, p. 25.

[5] Robert Dreyfus, "Essai sur les lois agraires sous la république romaine," *Journal des économistes*, March, 1899, p. 457.

Antony, and Augustus, also distributed shares of land to their soldiers. But not the Gracchi, nor Sulla, nor Caesar succeeded in keeping the Italian agriculturists in the plains. Human forces were shattered in combat with fate. Rome was attracting all to her; she had become, according to the expression of Catiline, "a head without a body." Free distributions of grain were feeding idleness and venality in the city, and the increasing number of slaves was preventing the slightest profit for the labor of the freeman in the country. Finally, civil wars, the most deadly of all things, had caused great ravages in the ranks of the veterans, most of whom had taken up their swords again and abandoned their farms.[6]

The situation of the country and the city under the empire was no more favorable, and Augustus also strove to remedy the evil. He attempted to repopulate the country by the foundation in Italy of twenty-eight colonies of veterans to whom he assigned some proprietors of Italian lands as assistants. But the exodus of the rural populations to Rome by preference and also to such maritime cities as Ostia, Puteoli, and Brundusium was a fatal current that no legislative or administrative measure could stem. The failure and the stupidity of all attempts to repopulate the country were unquestionably the cause of the creation of numerous agricultural colonies of veterans by the successors of Augustus, including Claudius, Nero, Vespasian, Titus, Nerva, Trajan, Probus, and Alexander Severus.

Thus rural emigration and the abandonment of agriculture assumed really alarming proportions in Rome. A still more formidable scourge, the decline of the birth rate, had settled upon the hearth of families in all Italy, and the famous "Caducary laws" never succeeded in driving it away from them. . . .

However, the establishment of the *coloni* and the practice of granting a long lease brought back some farmers to the country, which was thus saved from complete depopulation. The desertion of the fields, nevertheless, disturbed Roman society for a long time. Justinian attempted to end it by restrictive edicts against it. He devoted an entire section of his code to this problem.[7]

In Gaul and in the country of the Franks there could be no question of the abandonment of farming in favor of residence in cities for a long time after the invasions of the barbarians and the beginning of the economic and social disorders that resulted. Among the Franks, as among the ancient Gauls, urban life was very little developed, if not quite unknown.

It is true that in the south of Gaul some cities founded in the period

[6] Ferlet, *op. cit.*, p. 56.
[7] Code, Bk. XI, tit. VIII.

of the Roman colonization retained a certain importance, living by virtue of their ancient fame. But in the epoch of the Frankish kings a phenomenon arose that was the antithesis of the one we have observed during the last centuries of Roman society. There was no rural depopulation; rather there was a disaffection for urban life. This feeling seems to have been a characteristic of German peoples, who from the first had an instinctive horror of cities. The Gallo-Roman nobles themselves adopted this new kind of life, and, deserting their city palaces, came to establish themselves in their villas, which up to that time had been only country houses. This rural movement originated, moreover, in the custom of living in the country, practiced by all the Frankish kings except Clovis, who towards the end of his life established his residence in Paris. Only later were cities developed, and then emigration from rural districts appeared again.

194. Jean Guillou: Temporary Emigration *

Temporary or periodical emigration is the removal of the peasant or rural artisan for a few months each year to seek, either in the city or country, means of subsistence, which seem to be periodically lacking in the home country. He always returns home with whatever money he has accumulated.

Temporary emigration as we have defined it has long been a custom among certain rural populations—sometimes for centuries. Some departments of our three great mountainous groups, the Alps, the Pyrenees, and the central group, in which agriculture is not very prosperous and the soil is not very fertile, have practiced temporary emigration almost from time immemorial.

Temporary emigration is a demographic movement the importance of which we cannot ignore. Some of the general causes of temporary emigration are as follows: the sterility of the soil or the lack of sufficient capital to improve it; the inability of the petty farmer to earn money by any means other than agricultural labor because of the absence or removal of local industries, whether large or small; the insignificance of the local trade; and—less often today than formerly—difficulties occasioned by seldom opened roads or rudimentary means of communication, which prevented the lucrative sale of various products of the country. Another cause is the absenteeism of the large landowners, who, if they had resided on their lands, would have been able to procure work for many laborers who were forced by the absence of local employers to seek work elsewhere. . . . Very often, too, a kind of atavistic instinct urges the inhabitants of certain regions

* Adapted from Guillou, *op. cit.*, chap. ii, sec. ii, pp. 94–95, 102–107.

to seek their fortunes and to let themselves be tempted by the attraction of travel. They strive to better their condition by earning some money away from home, which upon their return they set apart for the acquisition of a bit of ground in the district or for the improvement of their little domain.[1]

Temporary emigration and permanent and suburban emigration usually proceed from the same causes, with one difference, however: In the temporary emigrant the love of the soil or of his native land is more persistent and more deeply implanted than in the permanent emigrant. Thus, many temporary emigrants never cease to belong to agriculture, even during their migratory periods. The permanent emigrant, on the other hand—and here we are speaking only of the one who leaves the country for the city—is irretrievably lost to agriculture.

We must now estimate in an impartial manner the most usual consequences of this migratory movement. Most authors who have treated the question of temporary emigration, either directly or incidentally, agree that it has excellent economic effects, but they are divided in their opinions concerning its social consequences. For our part, we remain convinced that temporary emigration has only the most favorable consequences for both emigrants and emigrant centers in the majority of cases. We can make no better statement of the advantages of temporary emigration than the following citation from the work of Karl Kautsky concerning the peasants of both sexes of the region of Wiesbaden who emigrate as peddlers every year, from spring to winter, to various countries—Holland, Switzerland, Poland, Saxony, and others.

"A long time ago we made the remark that in the localities where a certain number of itinerant dealers of this sort are recruited the agricultural situation improves little by little. The wages of the children are given to the parents and employes in the common interest. They serve to give a better direction to the work on the farm; farm animals, particularly cows, are purchased; fertilizers are bought, and these assure a better harvest. The property is enlarged, and some money is put in the savings banks." [2]

From the moral and social point of view, we have often been able to say with reason that temporary emigration had some disastrous consequences, especially for the women. Always when he returns to his native land, the agriculturist who leaves his country regularly each year tells tales of his nomadic life and of his few months of life in the

[1] Alfred Legoyt, *Du progrès des agglomérations urbaines et de l'émigration rurale en Europe et particulièrement en France*, Marseille, 1867, pp. 75–80.

[2] Karl Kautsky, *La question agraire: Étude sur les tendances de l'agriculture moderne*, Paris, 1900, p. 290.

midst of cities. He introduces ideas, customs, and new needs, which are incorporated, little by little, into the life of the rural community. "The enlargement of the intellectual horizon," says Kaerger sadly, "the greater mobility of mind that the emigrant worker acquires, has often caused an obvious diminution of respect for established authorities. The people become bold, insolent, arrogant, and proud. They contribute by their example to the weakening of the patriarchal relations that in most of the estates in the east of Germany still exist between masters and servants and that are in perfect harmony with the economic and social state." [3]

Karl Kautsky and other socialists are pleased with the influence of the work done away from home on the minds of the country people. We quote from Mr. Kautsky, who says that "It strengthens the economic position of the small landowners (the so-called conservative element of the population), but at the same time it completely revolutionizes the conditions of their existence and gives them desires and ideas that are certainly not conservative." [4]

It would be useless to deny that sometimes such consequences do occur. We continue, however, to believe in the beneficial social influences of the patriarchal organization and of ownership. Particularly, we can never be too thankful for the development that the small landowner makes from day to day in our own rural France.[5]

195. Jean Guillou: Reducing Rural Emigration *

In our opinion the improvement of the lot of the rural populations is the sole rational and liberal means of retaining in the country some of those who would be disposed to leave it for the cities. Rural life still satisfies but imperfectly the needs, exigencies, and multiple aspirations incidental to modern existence.

Nevertheless, however effective the means utilized to realize this economic and social improvement may be, it is impossible to believe for a moment that their influence will ever become powerful enough to paralyze definitely the emigration from country to city. Whatever the social status of the emigrants, their liberty to leave the fields for the city must be respected in all cases. The measures, therefore, that we are going to propose as possible means of reducing the emigration from the country to the cities will always allow for the full and entire freedom of the persons concerned. Unfortunately, this has not always

[3] Kaerger, *Die Sachsengängerei,* p. 180, quoted in Karl Kautsky's *La question agraire,* p. 292.

[4] Kautsky, *op. cit.,* p. 293.

[5] A. Souchon, *La propriété paysanne,* Paris.

* Guillou, *op. cit.,* Part III, chap. iv, pp. 482–489.

been true of the measures taken in the past. During the long history of rural emigration, and even today, one is sometimes painfully surprised to discover the illiberal restrictions that have been placed upon emigration from the country. All these coercive measures, even when they emanate from the mind of an all-powerful Caesar and are supported by his uncontested authority, are ineffectual in combating the abandonment of rural life. Caesar, by the agrarian laws, forbade his veterans as well as the fathers of three or more children, to whom he had assigned shares of land in the fertile territory of Campania, to sell these lots until after twenty years' possession. We quote from Ferlet, who says that "in order to bring back to the Roman country districts the life that had been removed for so long, Trajan required all candidates for public offices to have at least a third of their fortunes in real estate situated in Italy." [1] All these measures of authority and too many others to enumerate here were powerless to stop the desertion of the Roman countryside.

In all the epochs of relative industrial and commercial prosperity—periods, that is, when wars, famines, or plagues were not decimating the rural population—there was under the ancient régime an important movement of urban immigration after the Crusades and in the epoch of the Renaissance, under Henry IV and Sully, under Louis XIV and Colbert, and at the beginning of the modern industrial order towards the close of the eighteenth century. Meanwhile, two fundamental institutions of the ancient régime were uniting their efforts in vain to retain the entire rural population in the country: the bourgeoisie with their privileges and the guilds, which tended to keep the peasants away from the city.

Roscher writes: "In 1388 the English laws decreed that no child employed in agriculture up to his twelfth year was to be admitted as an apprentice to an industrial profession, and in 1405 they decreed that only parents possessing land or enjoying an annual rental of at least twenty shillings could bind a son to an industrial profession in the cities. London was freed from this interdict in 1429, however, and in 1495 it was removed even from Norwich. If similar laws had existed in Prussia and Saxony in the second part of the last century, they would everywhere today be an anachronism.[2]

Formerly, when the cities were not increasing or even maintaining their populations except by means of peasant immigration, when they

[1] Ferlet, *op. cit.*, p. 104.

[2] Guillaume Roscher, *Traité d'économie politique rurale* . . . , trans. by Charles Vogel, Paris, 1888, p. 506. However, Charles Gide in *Principes d'économie politique*, Paris, 1898, p. 582, points out to us that even today in Rumania the foreign resident proprietors are subject to severe imposts.

were still, as *L'encyclopédie* (article on Population) defines them, "kinds of colonies that the country districts are obliged to repeople every year," the prohibition of emigration from villages to cities was for the purpose of limiting the area and development of urban centers. And we know how our kings in 1549, 1554, 1560, 1563, 1564, and 1672 forbade the extension of Paris beyond certain limits with an insistence that suffices to show the failure of their prohibitions.

"In the epoch of the last Tudors and Stuarts, proclamation upon proclamation appeared opposing the erection of new houses in London and ordering the country people to return to their villages." [3]

Savoy distinguished itself for all time by the custom of its inhabitants of emigrating in a body, some of them periodically and some to remain away permanently. A certain duchess of Savoy enacted the severest penalties against her vassals who emigrated to the larger cities abroad. Towards the middle of the seventeenth century, the emigrants were so numerous that during the minority of Charles Emmanuel II, an edict of the regent, dated December 8, 1645, forbade anyone, whatever his quality, age, or sex, to leave the states to go abroad under penalty of death and confiscation of property. Whoever left the country for more than two years was to repatriate himself in three months.[4]

Roscher tells us that Pius VII, to remedy as far as possible the devastation of the Roman country, the scourge of the latifundia, and the absenteeism of the large landowners, formed the plan of reestablishing around each city a zone of cultivation that was to increase in area constantly. To this end he raised the tax on the uncultivated lands within the limits of the major zones, which had previously been described (1802). De Sismondi thought that the tax rate was too low, but nevertheless recommended this procedure in a special memoir.[5]

Few of the measures proposed in our day are so arbitrary as those of the absolute monarchs of former times. Many adversaries of rural emigration, however, have proposed to end it by various prohibitive measures, all of which have as a common characteristic their too little respect for individual liberty. In Germany it has been proposed that a tax, an impost of establishment, be levied on all rural people coming to settle in cities.

It is a rather curious fact that, although the European states have made constant progress in liberalism for a long time, there are still individuals who, having some purpose to serve, would like to bring about a return of certain arbitrary curtailments of individual liberty that obtained in former times.

[3] *La réforme sociale,* p. 454.
[4] Mgr. Turinaz, *L'émigration rurale,* Paris, 1878, p. 103.
[5] Roscher, *op. cit.,* p. 273.

It is our belief, however, that all these measures, if ever anyone had the unfortunate courage to attempt to apply them, would be completely powerless to stop the movement towards the city. For their futile attempts the promoters would receive only reprobation, for having forgotten that the peasant "is not a vegetable attached to the soil from which it sprang."

196. Michael Hainisch: The Causes of Flight from the Land *

In the literature pertaining to the flight from the land, of which there is rather too much to be taken in at a glance, persistent attempts are made to enumerate the causes of this phenomenon. I consider it a merit of the American commission that it has reduced the manifold causes to a single one.† The commission finds the cause of the restlessness that has taken possession of the farmers in the fact that the farm yields neither the expected profit nor the desired satisfaction. The commission thus leaves it undetermined whether the movement towards the city has its origin in the fact that living in the country makes it impossible to satisfy the requirements of the higher life, or whether the city offers greater opportunity for profit than the country. Flight from the land, therefore, is, in the opinion of the commission, entirely a result of rational deliberation. It can only appear as a mass phenomenon where rational thinking has overcome stagnation. The more a people is inclined to rational deliberation, the more marked is the tendency to leave the land. In the United States this phenomenon plays such an important part that not even the proprietors themselves can withstand it. All the farmers who consider agriculture as a business, as a commercial or industrial enterprise, move away. Only the passive elements, says the report, remain there, because they do not know how to do anything else and hope to make progress through hard work and frugality. . . .

What applies to the United States applies also to New Zealand and Australia. The Australian farmer, like the American, is a business man in that he sells almost all his products and buys everything that he needs. The rate of exchange interests him, and his conversation turns upon figures. It is self-evident that such a farmer must be very slightly attached to the land. Similar conditions seem to exist in South Africa, where even one generation ago the observation was made that the English farmer there, as contrasted with the Boers, could not be kept

* Adapted from Michael Hainisch, *Die Landflucht, ihr Wesen und ihre Bekämpfung in Rahmen einer Agrarreform,* Jena, Gustav Fischer, 1924, pp. 31–68, 69–76. Translated and printed with the permission of the publisher.

†This refers to the Roosevelt Country Life Commission.

in the country when more life was to be found in the city, and when there was an opportunity to make money.[1]

In England, France, and Germany, however, it is chiefly the laborers and the children of the independent husbandmen who are likely to succumb to the temptation to engage in an occupation different from that of the father. On the other hand, peoples less highly developed economically are very strongly attached to their piece of land. It is true that the young people leave home, but the majority have no other aim than to save sufficient money through their own work to enable them to acquire a piece of land and continue to live in the traditional manner. The Polish seasonal laborer, like the Slovak who drudges for several years in the United States, spends his old age as a small-scale farmer in his native region. Somewhat better houses in Czechoslovakia are the only evidence that their owners are "Americans." . . .

The American commission distinguishes between the requirements of a higher mental life and the better prospects of profit. It has thus considered the motive for leaving the land from two standpoints. It must be granted without further discussion that, to the American, life in the country offers very little opportunity for intellectual life. Even the landscape is, to a large extent, uniform over large areas; and the arrangement of the farm buildings is not less so.

I have begun intentionally with American conditions because they seem to be extreme. But what is true of America is more or less true of Europe also, where the monotony of rural life plays a certain part among the causes of flight from the land. Vandervelde speaks of *villes tentaculaires,* by which he means to point out that the cities exercise a certain power of attraction over the rural population. This power has been judged very differently from the points of view of different observers. Large landowners whose laborers have departed like to speak of the quest for pleasure that entices the people to the cities.

But, on the other hand, I still believe that the influence of cultural requirements and even of the quest for pleasure upon the masses of the country population is considerably overestimated. This is due to the fact that, as has already been mentioned, one always thinks of the departure from the country into the city as a "flight from the land," whereas it actually deals with flight from agricultural to other occupations. As was emphasized also during the course of the French *Enquête,* it is not the city that attracts the rural people but agriculture that repels them. This is revealed by the fact that every industrial

[1] Albert Métin, *Le socialisme sans doctrines,* Paris, 1901, pp. 46 ff.; H. Rider Haggard, *Rural England,* London, 1902, II, 569.

enterprise that is established in the country, but particularly the railroad, exercises a strong attraction over the rural population. Farm laborers like especially to turn to mining. The great centers of the coal industries have grown at least as fast as the large cities. And still no one will seriously pretend that life in a mining district is high in culture and satisfactory in aesthetic respects. American cities also offer the laborer extraordinarily little; this is particularly true if he is not conversant with the English language. But skilled laborers, although they are entirely familiar with the English language, are likewise unable to participate in any intellectual life because their work is so strenuous that their Sundays as well as their evening hours during the week must be devoted wholly to physical recuperation.

I believe, therefore, that the greatest significance ought to be attached to the second group of motives, and that considerations of an economic character are chiefly responsible for the exodus. The idea is often formulated that the probability that one will improve his economic status by means of agriculture is not great. It is assumed that the lack of these prospects fills ambitious individuals with a distaste for remaining on the land.[2] It is a fact that there are no real opportunities for the farm laborer. In regions of large landholdings, especially in peasant sections, it is extremely difficult for an intelligent laborer to rise. In contrast the city, theoretically, offers limitless opportunities. It cannot be denied that the opportunity for economic betterment attracts the people as a light draws moths and other insects. But the belief that migration receives its initial impetus in the desire for social improvement is untenable; for, as has been said, many former farm laborers, as well as other persons engaged in agricultural work, remain in the country, even though in pursuits other than agriculture the possibility of advancement is also very small. Or does anyone really mean that a hired farmer becomes a miner, a quarryman, a signalman, or a street sweeper only because these positions are the lowest step of a ladder that he can gradually climb? Even in the cities such prospects, indeed, are scarcely available. Booth has proved that country-born people in London occupy positions that require either reliability or great strength, working as unskilled laborers in building operations or as policemen, porters, railroad men, coachmen, and so forth.

What is true of conditions in England is true in Germany also. Maria Bidlingmaier, who has done very thorough research work on the subject of agricultural conditions in two counties of Württemberg,

[2] Max Sering, "Die innere Kolonisation im östlichen Deutschland," *Schriften des Vereins für Sozialpolitik*, Vol. LVI, 1893, p. 14. Heinrich Sohnrey, *Der Zug vom Lande und die soziale Revolution*, Leipzig, 1894, p. 33.

notes the fact that there is no immediate endeavor to rise into high social classes among the migrating peasant children.[3] Country children, however, enter occupations in which in addition to unskilled laborers there are others possessing considerable skill. But in such work the young peasants generally take the place of unskilled laborers only. Thus Heiser-Harttung, investigating the conditions of 200 workmen in Hamburg and Berlin, established the fact that farmers' sons are almost always to be found in occupations requiring physical strength. On the other hand, machinery is operated almost entirely by proletarian children. In Königsberg all the laborers and laborers' families, whose conditions Mulert studied, remained in unskilled work.[4] Formerly at least, girls coming to the city engaged in domestic service for the most part. Of all women coming to Halle from the country, no less than 38.4 per cent became servant girls.[5]

Much insight into these conditions is obtained also from the investigations concerning vocational fitness and adaptability carried on under the auspices of the Society for Social Politics according to the program of Max Weber. They confirm the view that the great majority of former farm laborers remains in the lowest rank of the labor hierarchy. It is an established fact that this is particularly true in the textile industry. "The unsuitability of farm laborers for the textile industry," says Marie Bernays, "is to be explained, first of all, by their former conditions of life—the contemplative, unhurried manner of their existence, with its disregard for time, which qualifies the people just as little for the factory discipline with its strong emphasis upon punctuality as, in general, it does for the close attention required by the machine." "And then," she continues, "their roughened fingers make them unfit for finer work." Speyer stated that 40.8 per cent of the spinners were of proletarian origin as compared with 28 per cent of all male laborers in general. In München-Gladbach's investigations it was found that the number of persons from the proletarian class among the skilled laborers was 48.8 per cent of the total; of those from the peasant class, only 10.2 per cent. The comparative proportions among the women workers were not essentially different, viz., 44.3 per cent and 11.2 per cent.[6]

[3] Maria Bidlingmaier, *Die Bäuerin in zwei Gemeinden Württembergs,* Stuttgart, 1918, p. 188.

[4] Franz Heiser-Harttung, *Ländliche und städtische Arbeiter. Ein Vergleich ihrer Budgets,* Merseburg, 1902. Oskar Mulert, *Vierundzwanzig ostpreussische Arbeiter und Arbeiterfamilien,* Jena, 1908, p. 117.

[5] Dr. Hans P. Allendorf, *Der Zuzug in die Städte, seine Gestaltung und Bedeutung für dieselben in der Gegenwart,* Jena, 1901, pp. 26 ff.

[6] Marie Bernays, *Auslese und Anpassung der Arbeiterschaft* (*Schriften des Vereins für Sozialpolitik,* Vol. CXXXIII), Leipzig, 1910, p. 309.

But in the metal industry also the country-born people fare badly. Thus, for example, in a roller mill in Upper Silesia only 9 per cent of the country-born laborers occupy a specialized position. Similar conditions prevailed in a cable factory. The more technical the work to be done, says Bienkowski, the more the urban elements turned towards it. They displayed a superior intelligence and a superior mental alertness. Deutsch also observes, in his essay on the Austrian Siemens-Schuckert works, that the unskilled laborers and those whose work requires strength were chiefly immigrants from the rural regions. A similar condition was found in a manufacturing establishment in Vienna, the condition of which Sorer investigated. In this plant also blacksmiths and semiskilled laborers belonged to the country-born class. Of the ablest twenty-one laborers only 28.6 per cent were born in the country. In the Daimler factories in Stuttgart, also, the wages of the urban-born men were higher on the average than those of the rural-born laborers. Herkner, in summing up the results of these investigations, observed that skilled laborers came from the skilled labor and artisan classes. Most of them came from small or medium-sized towns, and only a few, including blacksmiths and wagoners, came from the country. Herkner discusses the possibility of advancement and notes that this has increased with the increase in the number of foremen's positions. Workers who have in addition to efficiency in their work a certain theoretical education and facility in speaking and writing or certain other specific traits have the best prospects of obtaining such positions. Consequently the possibility that unskilled laborers will advance their children socially is small. Alfred Weber comes to virtually the same conclusion. According to him, in rurally situated industries two-thirds of the unskilled laborers came originally from the country as compared with somewhat more than a fourth of the skilled laborers. Promotion above the rank of the proletariat does not take place; advancement is possible only within the limits of the class. But as a rule it is only a question of a short-term advancement.[7]

[7] Friedrich Syrup, "Die soziale Lage der seszhasten Arbeiterschaft eines oberschlesischen Walzwerkes," *Schriften des Vereins für Sozialpolitik,* Vol. CLIII, 1915, p. 146; Dr. Ing. von Biénkowski, "Untersuchungen über Arbeitseignung und Leistungsfähigkeit der Arbeiterschaft einer Kabelfabrik," *ibid.,* Vol. CXXXIV, 1910, pp. 9–12; Julius Deutsch, "Auslese und Anpassung der Arbeiter in den österreichischen Siemens-Schukert-Werken in Wien," *ibid.,* Vol. CXXXIV, 1910, p. 257; Richard Sorer, "Auslese und Anpassung in einer Wiener Maschinenfabrik," *ibid.,* Vol. CXXXV, 1911, Part I, p. 241; Fritz Schumann, "Die Arbeiter der Daimler-Motoren-Gesellschaft Stuttgart-Untertürkheim," *ibid.,* Vol. CXXXV, 1911, Part I, p. 61; Heinrich Herkner, *Verhandlungen des Vereins für Sozialpolitik in Nürnberg, 1911,* Leipzig, 1912; Alfred Weber, "Das Berufsschicksal der Industriearbeiter," *Archiv für Sozialwissenschaft und Sozialpolitik,* Vol. XXXIV, Part II, p. 381 (1912); Marie Bernays, in *Schriften des Vereins für*

It is, in any case, very questionable how far a desire to advance to a higher class may actually be present in the broad ranks of the industrial population. We have already spoken about those migrating from the country. Heiser-Harttung denies the significance of such a desire and observes that where such a wish exists it expresses itself only in a very crude form. Levenstein studied over 5,040 answers that he recieved from laboring people in reply to a questionnaire. He also expresses the opinion that to become one's own "boss," or to advance as an individual, seems to play no part in these desires. Bernays is in complete agreement with these observations, asserting that the laborers with whom she communicated wanted government positions, above all, in their youth, especially positions in the postal service or with the railroads. The prospect of an old age pension was the chief motive for their preference for government positions.[8] Moreover, this indifference of the laboring masses is not a German peculiarity. In New Zealand as well it appears that there is little interest in advancement among the working people. It is true that the possibilities of such advancement may be less good there than in the United States. Clark attributes this to the fact that the entrepreneurs in New Zealand usually manage their own establishments, whereas management in the United States is incumbent upon officials. Here, by virtue of the hierarchy of officials and subordinates, advancement is possible for able persons in the working population.[9] I am therefore of the opinion that it is an inadmissible generalization to assert concerning the great mass of those who abandon agricultural pursuits that it is the impossibility of advancement that causes them to make this flight. Obviously in making such an assertion one makes the mistake of assuming that motives that play an important rôle among particular classes are operative also among the great mass of the people.

Neither the men nor the women who take up occupations other than agriculture do so as a rule because they believe that in the new calling the possibility of advancement will be opened to them. They

Sozialpolitik, Vol. XXXV, Part I. [These statements seem to exaggerate the real situation. The data supplied in the preceding chapters show that there is an adequate number of country migrants among notables of various countries. Moreover, the above figures without the corresponding ones for the rural population on the total population cannot prove anything. The editors do not deny, however, that there is some validity in the author's criticism of the proposition discussed.]

[8] Adolf Levenstein, *Die Arbeiterfrage,* Munich, 1912, p. 404.

[9] Victor S. Clark, "Labor Conditions in New Zealand," *United States Bureau of Labor,* Bulletin No. 49, 1903, p. 1173. According to an English report the greater portion of manufacturers, factory superintendents, and highest ranking subordinates in the spinning and weaving industries in Lancashire came from the laboring class. See Heinrich Herkner, *Die Arbeiterfrage,* Berlin, 1916, I, 56. Unfortunately the report fails to mention whether this promotion into the upper circles of leaders still continues to take place.

believe, rather, that by changing their occupations they will better their condition at the moment, whatever the future may have in store. No one turns his back on agriculture unless he is convinced that he improves his condition thereby. The American farmer, intensely concerned with his economic welfare, deserts agriculture because the interest on his capital appears to him too small in view of the great risk involved and the personal sacrifices he must make. And the European farm laborer judges in exactly the same way. In the first place, the much higher wages of the urban and industrial laborers attract him; moreover, in a degree not less striking, the comparatively shorter working hours, the frequently lighter physical exertion, the greater certainty of occupation, the greater independence, and the higher social status influence him.

First of all—to discuss these last factors first—there is no doubt whatever that the working hours of the rural laborers during the cultivation and harvesting seasons are much longer than those of the industrial laborers. In medium-sized and small-farm establishments work is carried on during the summer from sunrise to nightfall. The peasant hardly allows himself and his hired hands so much as six or seven hours of rest. On large-farm establishments the employes put in considerably shorter hours, but even these work for an appreciably longer time than do industrial laborers.

Agricultural work is as a rule not only longer but also more fatiguing than industrial labor, even when one considers that in modern agriculture the laborer is relieved of much heavy work by machines. The difference in strenuosity is especially great if one compares the work of a farm hand with that of a railroad conductor, porter, mail carrier, and so forth. No wonder that the positions just enumerated have a strong attraction for the rural laborers. In addition, the work on the farm must be performed under less favorable external conditions. The farm laborer is not only required to handle dirty implements but must expose himself in a large measure to the inclemencies of the weather. He must be as little bothered by the burning sun as by the rain and biting cold. Working in the open air is, certainly, extraordinarily healthful, and the hardihood gained compensates fully for the increased danger of taking cold, but it is not very pleasant, certainly, to be compelled to defy every kind of weather. We must not be astonished, therefore, to discover first of all that women laborers withdraw more and more from agricultural work.

One of the most difficult problems of agricultural enterprises is the uncertain demand for labor during the year. After unusual exertion during times of cultivation and harvest there follow, even in the summer and the fall, periods of less employment. By the time of snow

and frost very narrow limits are drawn for the same agricultural occupations. Work is restricted to the hauling of fertilizer, wood, stones, and other materials. The problem of the fluctuating demand for labor during the different seasons of the year is comparatively new. In the golden age of peasant economy one helped oneself out by engaging in other than purely agricultural labors.

This equilibrium between the summer and winter demands of labor was seriously disturbed by the increased division of labor. In the course of this development not only did the custom of refining materials in winter disappear to some extent, but agricultural enterprise underwent such a transformation that increasingly the work assumed the character of seasonal labor. This change is to be explained partly in terms of technique and partly in terms of economy.

Mailáth reports that in Switzerland the total working time of a laborer on the farm amounts to only 88 working days per year, of which 38 are in spring, 22 in summer, and 28 in autumn. Navay, who goes into more detail than Mailáth, gives the distribution of labor for the various months of the year. Expressed in comparative figures the distribution per 100 days is 30.3 days in April, 13.9 in May, 10.4 in June, 8.3 in July, 7.8 in August, and 7.0 in October. These six months contain not less than 77.3 per cent of the total number of working days. The employment of labor was least in December and in March, which contained 2.0 and 2.9 working days, respectively. The circumstances of the laborers were mitigated and made half bearable, as long as the workers led a purely vegetative life, by the receipt of wages in natural products.[10]

In Germany and Austria intensified farming, especially in beet culture, has brought about in a great measure the instability of the demand for labor.

The more difficult it becomes to obtain laborers the more the farmers will be compelled to adapt their enterprises to the number of available workers. And, indeed, the farmer does not face the problem of the adjustment to the demand for labor entirely without help. Meyer has already called attention to the fact that an adjustment of labor during the harvest could even be brought about by the continuation of the same crop rotation, if one were to grow in part early maturing and in part late maturing kinds. Aereboe has also recommended this solution recently. But as a rule the farmers have sought to help themselves by the employment of transient laborers.

[10] Josef graf Mailáth, *Studien über die Landarbeiterfrage in Ungarn,* Vienna, 1905; Ludwig von Návay, "Die Arbeiterfrage im Alföld mit besonderer Rücksicht auf die Arbeiterverhältnisse im Komitate Csanad," *Zeitschrift für Volkswirtschaft, Sozialpolitik, und Verwaltung,* Vol. VI (1897).

Transient labor is nothing new. Though transient labor, as such, is old, it has become a mass phenomenon only during the last generation. The growing discrepancy between the summer and winter demands for labor and the movement of the indigenous laborers to the cities and industrial regions, however, have compelled the farm proprietors to employ transient laborers in an increasing degree.

The problem of transient labor is a problem of wages: the farm proprietors prefer the cheap transient laborers to the native workers, and consequently the latter lose employment. As was stated above, the best way of eliminating the fluctuations in the demand for labor was considered to be the employment of laborers out of work, thus establishing a counterbalance to times of large demand. The employment of transient labor, however, does not bring about any solution of this problem, for indirectly the employer must support the transient worker, who must earn sufficient money during the summer to enable him to live throughout the winter. The peasant has never employed transient labor to any great extent. The small peasant proprietor, assisted by his family, can perform all the work by himself, and the large-scale farmer hires men and women who are his steady laborers and are kept all year. Dismissals before the coming of winter, however, are not infrequent. Thus we are clearly obliged to regard the instability of occupation in agriculture as one of the causes of flight from the land.[11]

But flight from the land is caused also by social conditions that I have described above as the too great dependency and the too low social rank of the country laborer. If we consider the laborers of the peasant establishments it must be allowed that the hired men and women are bound to a certain domestic régime. The hired hand, to be sure, has never paid any great attention to this rule, as may be seen from the complaints raised of old concerning the licentiousness of farm laborers. The meals, it is true, are taken in the dining room. But the more the patriarchal customs lose their force, the more the family of the farmer holds itself aloof from the servants, and, especially, the more widespread becomes the custom of taking meals separately, the more strange the laborer feels himself on the farm. What, asks the French *Enquête,* is such a hired man to do during his resting hours?

[11] Michel Augé-Laribé, *L'évolution de la France agricole; Bulletin mensuel de l'office de renseignements agricoles,* Ministère de l'agriculture, 1912. Rudolf Leonhard, *Die Landwirtschaftlichen Zustände in Italien,* Hanover, 1919; Francesco Rovelli, *Die Agrarverfassung der Niederlombardei mit besonderer Berücksichtigung der Landarbeiter,* Karlsruhe, 1908. Julius Frost, *Agrarverfassung und Landwirtschaft in den Niederlanden,* Berlin, 1906; Rudolf Görnandt, *Die Lage der grundbesitzenden Tagelöhner in Nordwest- und Ostdeutschland, mit besonderer Berücksichtigung der Provinzen Schlesien und Posen,* Berlin, 1910; C. A. Zakrzewski, "Zur ländlichen Arbeiterfrage im Osten Deutschlands," *Schmollers Jahrbuch,* 1890, Vol. III.

In the common room he feels strange; in the attic, where his bed is found, it is uncomfortable. Nothing remains for him, it is said, but to sit down on the garret stairs and let his legs dangle. The worst part is that the servants rarely have opportunities to establish families of their own.

In Bavaria, by order of the state and the police (1553), matrimony for servants was completely forbidden. Later a general prohibition of matrimony for people without means was issued not only in Bavaria but also in the Austrian crown lands. In Austria at the beginning of the constitutional era the requirement of an official sanction for marriage was repealed; only in Tyrol it remains in operation up to the present time. Under such conditions one should not be astonished at the fact that in Bavaria in 1799 only 3.5 per cent of the servants were married. The unmarried state of the servants, however, is the result not only of restrictive legislation but also of their condition. Thus still today in Switzerland, of every 1,000 male servants over eighteen years of age, not less than 829 are single, whereas the number of single persons on the average is but 402. Consequently we find everywhere a rather rapid decrease in the number of servants, whereas the number of day laborers and married subordinates is increasing. Foltz was able to make this statement concerning Austria a generation ago. He observed that in 1869 the ratio of day laborers to servants was 35 to 100, but that this ratio was perpetually shifting to the disadvantage of the latter. Schullern makes the same statement concerning North Tyrol and Maehren. In Switzerland, finally, the number of day laborers has increased while all other categories of the rural population have diminished in number.[12]

Under these circumstances there is but a slight possibility for agricultural employes to marry. This fact explains also the scarcity of laborers in the country. Thie marriage of servants, however, is the best method of creating an adequate agricultural working class. The servant class consists mainly of persons born in the country. On the larger farms the brothers and sisters of the proprietor remain on the farm as laborers, whereas the small-scale peasant is not able to employ all his sisters and

[12] Hans Platzer, *Die Geschichte der ländlichen Arbeitsverfassung in Bayern,* pp. 98, 160, 198, and *Die ländliche Arbeiterfrage in der Schweiz,* I, 44; Karl Foltz, *Statistik der Bodenproduktion von Oberösterreich,* Vienna, 1878, p. x; Hermann von Schullern-Schrattenhofen, "Die Lohnarbeit in der österreichischen Landwirtschaft und ihre Verhältnisse," *Zeitschrift für Volkswirtschaft, Sozialpolitik, und Verwaltung,* V, 23, 43 (1896); *Österreichische Statistik,* 1896, Vol. XLIV, Part I, p. xxvi. Concerning the disinclination of German farm laborers to become servants we have the findings of von der Goltz in the year 1875. See "Die Lage der ländlichen Arbeiter im Deutschen Reiche," *Berich an die vom Kongress deutscher Landwirte eingesetzte Kommission zur Ermittlung der Lage der ländlichen Arbeiter im Deutschen Reiche,* Berlin, 1875, pp. 451 ff. Concerning a similar development in the Rhineland compare Eberhard Gothein, *Agrarpolitische Wanderungen im Rheinlande,* Berlin, 1896, p. 327.

brothers. These look for work with the neighbors. But with the development of a certain class consciousness on the part of the peasants and of the working class, the children of the former avoided taking work with a neighbor, for this would amount to a descent in the social scale. Only in those sections where the social gap between small- and large-scale peasants is very wide do the children of the former serve the latter.

Where such a gap does not exist, however, the children prefer to take any kind of work in the city, where they are unknown, rather than serve a large-scale farmer. In this way the children of the small-farm operator escape the pressure of public opinion in their home surroundings.

Although in rural regions compulsory celibacy and the public opinion of the village exercise strong social pressure, on the other hand in regions composed exclusively or predominantly of large estates it is the proprietors, or their officials, at least, who are chiefly responsible for restricting the freedom of the country laborers. On the occasion of a visit that I made in Bohemia during the winter of 1921 I was told that even today in the domains of southern Bohemia employes and laborers are addressed as "thee" and "thou"—that is, are made to feel subordinate. It is obvious that all self-confident and mentally alert members in the population leave regions where the social pressure is so strong.

The difficulty of carrying on an independent existence is closely connected with the housing problem. The rural laborer who wants to establish a family needs a dwelling, but he is very easily satisfied in this matter. In fact, he often prefers a small dwelling to a large one. "The women," says Graham, who is probably one of the best informed regarding English rural life, "want to have everything as close as possible in order to save labor. They have so much to do in the house and yard and they dislike climbing steps. The people live closely crowded together, and take care not to have much baggage when they move. In the city everything is changing; the women no longer have a household." These observations agree perfectly with my experiences. Years ago I inspected the dwellings of my rural laborers and remarked with displeasure that the atmospheric volume per capita was too small. Accordingly I arranged a distribution of dwellings so that for each person there was a volume of at least ten cubic meters. After some time I repeated the inspection. To my astonishment I found entire rooms empty. For convenience and in order to save the work of preparing wood, the families had remained in their cramped quarters. I am of the opinion, therefore, that it was a mistake to specify the poor

condition of the dwellings as one of the causes of flight from the land.

All these negative items mentioned—the length of the working day, the exhaustiveness of the work, the danger of unemployment during the winter—could have been mitigated by one positive item: higher wages. Since, however, the wages are not sufficient to eliminate the negative items—and, as a matter of fact, they often are low—the capable man who understands his own best interest must exchange his agricultural pursuit for some other. Those who leave the country are laborers for the most part, as has already been said. If the remuneration, in terms either of money or of payment in natural products, appears to the laborer to be too small in view of the drawbacks of this work, he will no longer remain on a farm. No less a person than François Quesnay saw this fact a long time before the French Revolution. In one of his pamphlets he argues against certain widespread opinions, saying that flight from the land is not a consequence of the fear of military service or even a consequence of the knowledge of reading and writing, but a result of bad economic conditions in the country.[13]

No statistical comparison of the wages in industry and agriculture is known to me. We depend, therefore, on statements of individual authors. There can be then no doubt that the wages of agricultural laborers were in many cases very low half a century ago, or rather twenty to twenty-five years ago, when migration from the land was increasing more and more rapidly.[14]

What is true of Germany, namely, that the wages of farm laborers are low, is true also of Austria. Schlinkert has determined that Aus-

[13] François Quesnay, "Questions intéressantes sur la population, l'agriculture, et le commerce proposées aux académies et autres sociétés savantes des provinces," *Oeuvres économiques et philosophiques,* Paris, 1888, pp. 267, 268. Cf. Guillou, *op. cit.,* p. 47. For views similar to Quesnay's in the eighteenth century, see Giambattista G. d'Arco, "Dell'armonia politico-economica tra la città e il suo territorio," *Scrittori classici italiani di economia politica,* XXX, 56; M. Schumann, "Die inneren Wanderungen in Deutschland," *Allgemeines statistisches Archiv,* I, 517 (1890); Guéry, *La réforme sociale,* 1909, p. 617; Dufresne, *ibid.,* 1910, p. 700; B. Bodenstein and Max von Stojentin, *Der Arbeitsmarkt in Industrie und Landwirtschaft und seine Organisation,* p. 12; Émile Vandervelde, *L'exode rural et le retour aux champs,* 2d ed., Paris, 1910, pp. 49 ff.; Franz Mendelson, "Die Arbeiterfrage in bäuerlichen Betrieben," *Arbeiten der deutschen Landwirtschafts-Gesellschaft,* 1913, No. 245, pp. 142 ff.; Ernst Brünnel, *Der deutsche Landarbeiter nach dem Weltkriege; Ursachen der Landflucht und Vorschläge zu ihrer Beseitigung, von einem Landarbeiter,* Leipzig, 1917.

[14] Görnandt, *op. cit.,* Hagmann, *op. cit.,* and Goldschmidt, *op. cit.;* Herm. Ernst Fiedler, *Die Arbeiterfrage auf dem Lande,* Leipzig, 1895; Alfred Klee, *Die Landarbeiter in Nieder- und Mittelschlesien und der Südhälfte der Mark Brandenburg;* S. Goldschmidt, *op. cit.;* Paul Hornig, *Die Lage der ländlichen Arbeiter in der Grafschaft Glatz,* Jena, 1899; Dettweiler, *op. cit.;* A. Saucke, "Durchschnittliche Jahres arbeitsverdienst für land- und forstwirtschaftliche Arbeiter im Jahre 1905," *Conrad's Jahrbücher,* 1906, Vol. XXXI, Folge III.

trian farm laborers cannot, by the greatest economy, save more than 5 florins, 18 kronen from their total income during the year, whereas girls in the city can save 8 florins, 35 kronen (Austrian currency), provided they live very economically and have no illegitimate children. An expenditure of only 20 kronen at a time was estimated, however, for amusements on Sundays and holidays. Similar conditions prevailed in Moravia.

We see, moreover, that male agricultural laborers of the highest rank earned a daily wage of only 2 kronen. The wages of the women workers lagged behind considerably.

We are informed concerning the wages of English farm laborers through the agricultural conference held before the War. In 1901 the average weekly wage was 17 shillings, 6 pence, 15 shillings being the wage in produce. About 60 per cent of the adult male laborers earned less than 18 shillings a week. Then there followed a rise in money wages. But the private committee asserts that after 1907 real wages decreased, and that wages as a whole have fluctuated at a level below the minimum of existence. Levy observes in regard to this matter that the index of money wages rose during the period from 1900 to 1912 from 100 to 104.9, but that the prices of all the foodstuffs most important for laborers rose from 100 to 116.3.[15]

The low wages of agricultural laborers on the absolute scale, however, cannot yet be regarded as the cause for migration, which does not depend on the absolute but on the relative height of wages. Only if higher wages are paid in industry and trade than in agriculture will the abandonment of agriculture be economically motivated. It is unfortunate that, as has already been mentioned, comparative statistical statements concerning industrial and agricultural wages seem to be unavailable. I have found only a few data.

In the territory of the accident insurance company of Salzburg in 1893, individuals were distributed in wage categories as follows:

PERCENTAGE DISTRIBUTION OF INCOMES IN AGRICULTURE AND IN INDUSTRY, SALZBURG, 1893

INCOME IN FLORINS	MALE LABORERS		FEMALE WORKERS	
	Agriculture	Industry	Agriculture	Industry
Under 200	20.0	3.3	54.5	5.0
200–300	77.8	37.3	45.5	71.0
Over 300	2.2	59.4	...	24.0

[15] *The Land,* I, 4 ff.; Hermann Levy, *Soziologische Studien über das englische Volk,* Jena, 1920, p. 80; Skalweit, *op. cit.,* p. 145.

It is certain that prior to the War the wage of the industrial worker was on the whole much higher than the wage of the agricultural laborer.[16]

The fact that higher wages in the cities and industrial sections constitute the primary cause of the flight from the land would become apparent, even though nothing were known about the wages of industrial laborers, from the consideration that the wages of farm laborers become higher as the individual farms are located closer to urban or industrial centers. As long ago as the middle of the nineteenth century Caird noted that the wages of agricultural laborers were 37 per cent higher in the north of England than in the south. He states as the cause of this phenomenon the fact that industry is concentrated in the north, whereas the south is agricultural in character. Wäsche makes the same statement concerning Germany. In great industrial regions the wages of male farm laborers are 21 to 25 per cent higher and those of women workers are 11 per cent higher than in unindustrialized areas. In view of all that we know of the aversion of the women workers in particular for agricultural labor, the comparatively small increase in wages probably will raise doubts of the validity of the observation. However, the relationship between wages of male and female workers is not the question here. It is sufficient to observe that proximity to a city and to industry is associated with higher wages for farm laborers. In this connection Wygodzinski has said: "Where increase in wages is concerned, industry is the pacemaker." [17]

Not only the amount of the wages but also the amount and the direction of migration gives us information. Recently, according to the finding of Caird cited above, the English laborers emigrate from southern Wales, where the wages amount to less than 12 and sometimes less than 10 shillings, to a greater extent than from the east,

[16] Fritz Brössling in the *Zeitschrift für Sozialwissenschaft,* 1900, 3 Jahrgang; Altkemper, *op. cit.,* p. 44, 57, and 63; Ernst Bierei, "Die Bewegung der Arbeitslöhne in der Landwirtschaft," *Thiels Jahrbuch,* 1911, Vol. XL; W. Asmis, *Die Entwicklung der Landarbeiterlöhne in Preussen, Berlin,* 1919. See also Arno Hoffmeister, *Die wirtschaftliche Lage der Landarbeiter in Ostpreussen,* 1908; Borchert, "Die landwirtschaftlichen Betriebsverhältnisse im Kreise Steinfurt," *Arbeiten der deutschen Landwirtschafts-Gesellschaft,* 1911, No. 195, p. 32; Julius Frost, *Agrarverfassung und Landwirtschaft in Norwegen,* 1914, p. 80; P. Anderson Graham, *The Revival of English Agriculture, London,* 1899, p. 30; *Bulletin mensuel . . . ,* Ministère de l'agriculture, 1912, pp. 344, 350; A. Souchon, *La crise de la main-d'ouevre agricole en France,* Paris, 1914, pp. 90, 372; August von Miaskowski, *Das Erbrecht und die Grundeigenthumsvertheilung im Deutschen Reiche* (*Schriften des Vereins für Sozialpolitik,* Vol. XX), 1882, Part I, p. 24; Geheimrat Dr. Ponfick, *Soziale Praxis,* 30 Jahrgang, 12 Jänner, 1921, No. 2; August K. Skalweit, *Agrarpolitik,* Berlin, 1923, p. 292.

[17] James Caird, *English Agriculture in 1850–1851,* London, 1852, p. 511. Dr. Robert Wäsche, "Untersuchungen über die Betriebsorganisation der Landwirtschaft im Neuwieder Becken," *Arbeiten der deutschen Landwirtschafts-Gesellschaft,* No. 185, p. 42; Willy Wygodzinski, *Die Landarbeiterfrage in Deutschland,* Tübingen, 1917, p. 36.

where they reached 15 to 16 shillings. The same phenomenon was observed in Germany thirty years ago. In highly developed industrial regions the whole agricultural laboring class is absorbed. Thus in the county of Gelsenkirchen there no longer exists any permanent rural laboring class. The whole population has turned to mining, in which a greater remuneration is obtainable with less effort. Schoene reports that in the northern part of Saxony the closer one comes to the industrial centers and the more the manners and customs of the rural community have passed away, the more noticeable is the longing for the city in rural districts. It is also pertinent to note that Italians immigrating in large numbers to Switzerland prefer industrial labor to agriculture.[18]

As far as migration was concerned, Max Weber maintained that it was wrong to assume that those people emigrate whose circumstances are unfavorable. It is, on the contrary, the higher ranks of rural laborers that dwindle. It will undoubtedly be granted that laborers of lower rank are mentally more indolent than those of higher rank who will certainly be more susceptible to rationalistic influences than the former. But example invites imitation, and soon the entire farm laboring class, with the exception of some individuals of low mental ability, is caught in this current.

We have seen that the chief cause for the departure of the laborer lies in the relative inadequacy of his income. It would seem, therefore, that the flight from the land could be checked very easily. One need only equalize the conditions of life of the rural and industrial laborers. The intelligence of the rural population should be stimulated by the extension of socialized educational work (*Fürsorge*), but above all the income of this class should be sufficiently augmented so that the desire to improve his material conditions will lure no one from agricultural pursuits.

But an adequate increase in rural wages is made difficult by the low income return in agriculture. It is evident that farm establishments, which yield a low return, are little able to bear wage increases since the proportion paid for wages in agriculture is already relatively high. The farm bureau of Switzerland—the Swiss Peasants' Union—has compiled some very interesting statistics in this connection. The bureau starts with the fact that the average wage of a male servant amounts to slightly less than 1,100 francs, but that that of a skilled laborer in trade and industry is 1,800 francs. If wages in agriculture

[18] *Die Verhältnisse der Landarbeiter in Deutschland,* Part II (*Schriften des Vereins für Sozialpolitik.* Vol. LIV) 1892, pp. 133, 523; Dr. Bruno Schöne, in *Arbeiten der deutschen Landwirtschafts-Gesellschaft,* 1911, No. 185, p. 66; *Die landwirtschaftliche Arbeiterfrage in der Schweiz,* III, 137.

were to rise by only 50 per cent, that is, to 1,650 francs, an additional expenditure of 50,000,000 francs, or 7 per cent of the net agricultural return, would be necessary. If the wages of the relatives working for the farm owner were also raised in the same proportion, the production costs would be further increased by 17,000,000 francs, or 16 per cent of the net agricultural return. To enable the farm owners to carry this wage increase without suffering a reduction of returns, prices for products would have to rise 23 per cent. The question, therefore, remains open, whether or not such an increase in payment would be sufficient to compensate for the disagreeableness actually or presumably connected with agricultural labor and thus check the migration of the rural workers. In all probability the wages of agricultural workers must be kept a little above the wage level of industrial laborers who are not specially skilled. "Mankind will be bound," continues the Swiss farm bureau, "to pay for its dislike of agricultural pursuits." At all events the computations of this bureau indicate very clearly that an automatic adjustment of the rural labor problem is inconceivable. A solution, in the sense that the tendency on the part of laborers to abandon the farm or their agricultural pursuits is checked, is to be found only in a complete agrarian reform.

[The phenomenon* of the abandonment of the land may be observed among all cultured peoples. But the various classes in the population are not all involved in it to the same extent. The agricultural laborers are the most mobile, then follow the children of peasants, while the landowners are most stationary. Not only the several elements in the population but different countries and regions participate unequally in this movement. Von der Goltz calls attention to the fact that eastern Germany, especially, suffers greatly from the lack of laborers, and he connects the greater migratory tendency of laborers from the east with the preponderance of large estates there. The more large estates there are in comparison with the medium-sized country properties the greater is the migration. It is not the fact that there are large estates, however, but the fact that they are too numerous that causes the laborers to leave that section of the country.

In his book *Grossgrundbesitzverteilung und Abwanderung vom Lande* Sering points out that in all parts of Germany this tendency may be observed. In the districts located on the west side of the river Elbe the reasons for migration are quite different from those that prevail on the east side. The decrease in the population of the west must be explained in terms of purely economic causes, such, for instance, as the barrenness of the soil or the fact that the population was

* Editor's Note.—The following pages are abstracts of pp. 69–76 of Dr. Hainisch's work.

as large as could be supported at the existing price level. In the east, on the other hand, migration takes place in regions where there are many large landholdings. Only the sections where the population is Polish are exceptions; their population is not decreasing. The reason for this may be found in the greater contentment and domesticity of the Polish laborer as compared with the German. Sering continues: "Furthermore, it is not only the great estates that are losing their German population but the little towns east of the Elbe, whose population has decreased so much that today it is less than it was 35 years ago!"

These statements are certainly correct, but they contribute little to the solution of the problem as to whether or not large real estate holdings can be held responsible for migration from the land. For, as we have seen, migration takes place not only in the east but in all other parts of Germany also. Indeed, the official German bulletin, *Die deutsche Landwirtschaft,* criticizes the thesis that districts with large real estate holdings are especially concerned in the problem of the decrease in population. The bulletin asserts that "this proves correct in some sections, but it does not hold good in all. Furthermore, in some regions where the small holdings are the rule a great decrease in the population may be observed." In so far as Germany is concerned, the assertion that migration from the land is a consequence of the existence of large property holdings must be regarded with great skepticism.

This theory fails entirely when applied to Austria and Switzerland, where by far the greater part of the rural area consists of small estates. Yet in some districts in both countries migration from the land occurs in proportions large enough to constitute actual depopulation. The tendency that prevails in Austria and Switzerland is evident in France and England also. Graham notes in his *Rural Exodus,* that the population has decreased in Lincolnshire, though the small landholdings there are exceptionally numerous.

The author of the German bulletin mentioned above is certainly correct; not only the distribution of land but the whole economic order and especially the industrial development are important. The more intellectualized a population becomes, the more likely it is that the larger income obtainable in industry or trade will alienate the people from their agricultural work; in comparison with this fact, the importance of the distribution of real estate is secondary.

Max Sering begins with the consideration that small landholdings can be operated with the aid of a wife and half-grown children. The more the country is divided into small farms, the more easily can the large estates obtain the hired help that they need. If such conditions

were to prevail, the problem created by the difficulty in obtaining laborers in cases of emergency would be simplified. Sering, therefore, recommends an energetic prosecution of the policy, already begun, of inner colonization—that is, a partition of the large estates into comparatively small holdings. He is fully persuaded that to increase the number of small or middle-sized farms throughout eastern Germany would be to improve economic conditions. He refers to the dissolution of the large grain farms in the United States, and to the diminution of American landholdings.

Sering is correct in asserting that as the population increases the size of the landholdings and of the farm establishments shows a tendency to diminish rather than enlarge. The question now is whether or not the procedure he recommends shall be put into effect. The answer depends on whether we consider the phenomenon favorable or unfavorable. In other words, we must decide whether large or small establishments are preferable.

Various students have approached this problem from different standpoints and as a result have come to dissimilar conclusions. Social, political, hygenic, and economic considerations influence the judgment of the investigator, and consideration of the problem from various angles is by all means desirable. We are justified in asserting, however, that the existence of small-farm establishments does not conduce to a rapid increase in the population. A comparison between France and eastern Germany confirms this. The population of France, with a system of small-farm establishment, is static, whereas eastern Germany, which has large-farm establishments, is notable for its high birth rate.

In comparing the economic desirability of large- and small-farm establishments it must be borne in mind that that system is best which supplies the greatest possible number of men with food without overworking the agricultural population or hindering its participation in the cultural life of the nation.*]

197. Werner Sombart: The Causes of Migration†

The primary motive that impels migrants to flock to the city is hope of economic gain. The fact that the city is a better labor market makes it attractive for the great majority. This greater opportunity for earning a living arises from the following circumstances:

* Editor's Note.—The author's views concerning the advantages and disadvantages of small and large farms are given in Vol. I, pp. 466–477.

† Werner Sombart, *Das Wirtschaftsleben im Zeitalter des Hochkapitalismus,* Munich and Leipzig, Dunckner & Humboldt, 1927, I, 418–420. Translated and printed with the permission of the author and the publisher.

(a) In general, the demand for labor in the urban and industrial communities is constantly increasing. Such an increasing demand is impossible in agriculture, for, unlike industrial enterprises, it cannot undertake to increase its production to supply a constant or even an increased degree of productivity.

(b) The demand for personal and similar services is constantly increasing in the metropolitan centers in proportion as these centers attract more wealth and put it into circulation.

(c) Wages are greater for the same amount of labor in the cities. Wages are actually higher in the city than in the country for several reasons:

(1) Agriculture is in general subject to the law of diminishing returns. European agriculture, in particular, has been suffering from foreign competition in the last few generations, which fact, combined with the high price of land, has resulted in hard times; industry, trade, and transportation, on the other hand, have been prospering, for they operate under the law of increasing returns. . . .

(2) In the absence of a far-reaching division of labor in agriculture, no wages can be paid to the superior worker.

(3) In addition to the higher wages of individuals, there is a possibility of a greater family income than in the country. Women and children formerly were engaged in household activities that have since disappeared from the home in the small town and in the country. A thousand remunerative occupations are now open to them in the cities, including occupations carried on at home, washing, ironing, domestic service, waiting on tables, small business enterprises, carrying messages, and so forth. There is factory work, messenger service, and so forth, even for the younger children; prostitution and clerical and similar work for the adult daughters. In short, additional earning from all sides generally raises the income of the urban family far above that of the family in the country or in the small town.

In addition there are also extra-economic motives that draw the masses from the country into the city. Frequently the labor in the city seems easier to them than the labor in the country. The hauling of manure has impelled many a boy to go to the city; the milking of cows many a girl. Bismarck's assertion that the music hall was responsible for the abandonment of the country still retains its limited application if we substitute for the music hall the contemporary moving picture theater. One of the chief explanations of the strong attractive power of the city for the masses is found in the fact that it offers everything in the way of entertainment that appeals to the lowest tastes, which naturally are the tastes of the masses.

Above all, the wish for individual freedom makes urban life seem attractive; this factor, however, has often been stressed unduly. The freedom that formerly was to be found on the mountains exists now in the cities, and the masses are following it there. As the ideal of the masses, individual freedom always means freedom from something—from restraints, from all bonds imposed by the neighborhood, the family, and employers.

The reason for the rapid spread of the ideal of freedom, in so far as it is the result of the natural course of events rather than of conscious agitation, is twofold. The ideal of freedom has become the ideal of the masses as a result of the development of the city. It was the city that first emancipated the individual, and the great masses have gained an appreciation of the value of personal freedom as the city has grown. Thus a new standard for the evaluation of life has arisen in and by means of the cities. The fact that this standard so soon became universal is probably due to the development of means of communication. Its greatest effect has been to revolutionize the spirits of men, who adopt the new ideal of urban cultural life more rapidly than in earlier times.

198. Paul Meuriot: Migration from the Country to the City in France *

Immigration and growth of the cities.—Since 1876 the increase of the urban population in France has not only equaled but has consistently exceeded the increase of our total population.[1] This fact proves sufficiently the movement of migration from the country towards the cities. From 1876 to 1881 the rural population lost through emigration 821,000 inhabitants or 3.3 per cent; from 1881 to 1886 the loss was 455,000 or 1.9 per cent; and from 1886 to 1891 it was 585,000 or 2.4 per cent. The very slight excess of births in the urban population in the first two periods disappeared in the period from 1886 to 1891; so

* From Paul M. Meuriot, *Des agglomérations urbaines dans l' Europe contemporaine*, Paris, Belin Frères, 1898, pp. 88–90, 281–308. Translated and printed with the permission of the publisher.

[1] If one unites the three five-year periods 1876–1881, 1881–1886, 1886–1891, the results are as follows:

Urban and Rural Populations in France, 1876–1891

	Urban	Rural
There were in 1876	11,977,396	24,928,392
Excess of births from 1876 to 1891	81,016	1,468,681
There should have been in 1891	12,058,412	26,397,073
There actually were in 1891	14,311,292	24,031,900
Difference resulting from immigration	+2,252,880	
Difference resulting from emigration		—2,365,173

that during this period the population increased almost exclusively by means of immigration as follows: 1,080,000, or 9.1 per cent, from 1878 to 1881; 626,000, or 4.9 per cent, from 1881 to 1886; and 518,000, or 3.9 per cent, from 1886 to 1891. It was especially the decrease of foreign immigration that brought about the diminution of the urban increase that was due to immigration during the last period.

In this respect, too, the demographic situation of France differed from that of other countries. In the greater number of the other states the urban population had a fairly large majority of native-born members. Among us this [majority] did not exist; and it was almost solely by means of new arrivals that our urban population was recruited. This difference becomes more conspicuous if one compares the source of increase in the large cities of France, Germany, and England. In all the large cities in the latter two countries, as well as in Belgium and Holland, there was an excess of births, a more or less important factor in relation to their total increase. In France from 1872 to 1891 the increase of cities having more than 100,000 inhabitants in 1891 was 1,045,000, and of this total 890,000, or 87 per cent, was from immigration. In five out of twelve such centers, immigration was responsible for the total increase, and in the others except in the large cities of the Department of the North its contribution was considerable.

Principal causes of rural emigration.—We have enumerated the general causes that have contributed to the formation of urban centers; in the present chapter we should like to investigate more particularly the causes partially or wholly responsible for the abandonment of the land and for the consequent advantage to the cities.

The overpopulation of the country.—The first idea that presents itself as a cause of rural emigration is overpopulation; at least this is the most common explanation. It is certain that when increases in population are not accompanied by the creation of new resources by industry, emigration becomes a necessity for a part of the population. Agricultural land is, in fact, to use the term of Levasseur, inextensible; and however well cultivated one supposes it to be, it will not be able to nourish an ever increasing population.[2] Hence the phenomenon of rural migration, the proportions of which may be different at different times, but which, by its very nature, is universal. Does not the growth of the population, in addition to a bad system of cultivation and the absence of other forms of society than the rural one, explain in part the early Germanic invasions?

There is, therefore, a limit to agricultural or rural density; but what is this limit? In 1846 the density of the rural population in France

[2] Alexander Supan, "Die Verschiebung, der Bevölkerung in den industriellen Grossstaaten Westeuropas," *Petermanns Mitteilungen*, III (1892).

was 54.4 inhabitants per square kilometer; in 1861 it was only 47.2, a figure that we find again in 1876, but that fell to 45.5 in 1891 and even to 44.5 in 1896: rural density was, therefore, reduced nearly a fifth within half a century. In Germany this density was 48.5 in 1871; after a slight increase in 1880 (49.1) it returned in 1890 to the rate of 1871. In Belgium, if one considers the population of the towns of less than 5,000 inhabitants, one sees that the density of this population passes from 91 in 1846 to 96 in 1866 and rises to 106 in 1890. If, however, one considers only the centers of less than 2,000 persons, one finds that the density is 58 per square kilometer in 1890 and thus approaches that of France and of Germany. England, with a rural density of 53.6 per square kilometer, is in almost the same situation. In Austria the population in towns of less than 2,000 persons was similar in density, 51.8 in 1880 and 53.7 in 1890. In Denmark, essentially an agricultural country, the rural density is only 40.

In none of these countries just noted, therefore, does the wholly rural population attain a density of 60 inhabitants per square kilometer. And within each country this density presents great variations. In Denmark it falls as low as 20 in Jutland (*laën* of Ringkioeping).

In Germany the rural density is only 40 inhabitants per square kilometer in East Prussia and only 26 in Mecklenburg-Schwerin. It rises very high in Rhenish Prussia, but in this region there are large rural communities, *Landgemeinden,* which are actually extensions of big cities. The same is true in Brandenburg.

We are including the table of the density of the rural population in France in 1846 and in 1891. Of our departments, only sixteen have increased in density during this period.[3] Furthermore, of this number the departments around Paris, Loiret, Loir-et-Cher, and especially Seine-et-Oise, have merely profited by Parisian holiday visitors. The other departments whose rural population has increased in density are (with the exception of Pas-de-Calais) located in the center (Berry) and in the west (Brittany and Poitou). In the first place, rural density is not in proportion to emigration, since the departments of the south central group (*massif central*), where emigration is considerable, have a rather low density; we have stated above, however, that the emigration movement had made great progress in the Breton departments, and it is there that the population has now reached its maximum.

The régime of property.—In a general way the extension of large landed estates is a cause of emigration. We know how in Italy the development of the latifundia drove the small free proprietors from

[3] In our calculations we do not take into account the area occupied by urban populations, which on the whole is unimportant.

the country and, having made them proletarians, pushed them towards Rome. An analogous phenomenon occurred in modern England. As early as the fourteenth century the famous pamphlet of Langland[4] mentioned the great number of workers driven from the soil by the transformation of agricultural lands into great parks; later, in the sixteenth century, Minister Wolsey tried to check the development of great estates, and Thomas More counseled the establishment of manufactures in order to give work to the hands left free by this transformation of rural economy. Nevertheless, the class of free proprietors, of yeomen, remained everywhere powerful and served as the mainspring of the state until the eighteenth century. But then the aristocracy and the upper bourgeoisie,[5] already united under the name of "gentry," extended their domain by means of enclosures. These caused the disappearance little by little of the common fields where the flocks of the yeomen grazed. At the same time the rural servants began to go to the cities, where higher wages attracted them, and the small towns, which once were markets for farm products, were depopulated. The yeoman had no other choice than to die of hunger or to go away also. . . .

And, in fact, acts of enclosure, which had been rare before the reign of George III, multiplied after 1760. From then until 1840 Boutmy estimates that the enclosure was applied to 7,000,000 acres, or 2,800,000 hectares. The number of proprietors was restricted by reason of the growth of large estates.[6] Thus landlordism was established. . . .

In Germany, as in England, one can see the influence of large estates on emigration. It is, in fact, in the regions where they are most prevalent that the emigration movement reaches its greatest proportions. . . . In France the connection between large properties and emigration is not so clear as in Germany. . . . In Belgium it is especially in the provinces of the south, in the emigration regions of Luxembourg and of Namur, that one finds most of the great properties. In Italy[7] not only is the rule of the latifundia a scourge in

[4] Pierre le laboureur. "Establish, said Thomas More, manufactures of wool so that those who have become thieves or who will become thieves soon through necessity will find there an honest means of livelihood." See John R. Green, *History of the English People,* I, 371.

[5] See Toynbee, *Industrial Revolution,* and Émile Boutmy, *Le développement de la constitution et de la société politique en Angleterre,* revised ed., Paris, 1898, p. 234.

[6] Boutmy, *op. cit.,* p. 243, and George C. Brodrick, *English Land and English Landlords,* London, 1881. Boutmy states that from the sixteenth to the nineteenth century the number of proprietors in the population was reduced in the proportion of six to one.

[7] In many regions of Italy the proprietor rents his land to a general farmer. The latter subleases to several inhabitants who employ rural workers at ridiculous wages (sometimes 60 centimes a day).

Sicily, but in the Kingdom of Naples also, and even in Lombardy, the deplorable system of exploitation is especially strong. Inama-Sternegg has described the fatal influence in Austria [8] of great property, an influence that prevails particularly in Bohemia and in Galicia. The first of these provinces is one of the strong emigration regions of the empire.

But one must not insist too much upon the inconveniences of great property. The extreme division of the soil, its so-called pulverization, is very damaging to the prosperity of the population, unless very intensive cultivation, such as is possible only in the neighborhood of great centers, compensates for it. Large estates, moreover, produce different results when the proprietor resides on his lands and when, as in Italy, he is an absentee and permits a condition to arise and losses to be sustained that otherwise would be impossible. In Germany the institution of the *Rentengüter*—a tenure conceded to the agricultural laborer in exchange for a labor contract—binds him to the proprietor for a certain time. This institution seems to have had fortunate results in the eastern part of Germany, for within the period from 1890 to 1895 the rural population has increased.

In regard to this subject, therefore, one must not draw conclusions that are too absolute: the distribution of property may influence emigration; but it is not the only influence, and we shall see in the course of this chapter others that may act with it.

Methods of exploitation of the soil.—"Pasture countries," wrote Montesquieu,[9] "are little populated, for few people find work there; wheat lands provide work for more people and the vineyards infinitely more." That is to say, the kinds of crops cultivated have a direct influence on the development of the population and on emigration as well.

In Great Britain the extension of pasture lands at the expense of grain cultivation has led to the decrease of the agricultural population, particularly of rural laborers. Within the twenty-five year period from 1870 to 1894 the extent of cultivated grain lands decreased in Great Britain by 2,390,000 acres, or 956,000 hectares, of which 1,794,000 acres, or 717,600 hectares, were wheat lands alone.[10] The production of wheat had, moreover, diminished by half since 1871. On the other hand, pasture lands had increased since 1870 by about 5,500,000 acres, or 2,220,000 hectares. . . . In the same period the number of wage-earning agricultural laborers in the population has decreased noticeably.

[8] *Statistische Monatsschrift,* 1885.
[9] *Esprit des lois,* Bk. XXIII, chap. xiv.
[10] From the *Financial Reform Almanack of 1896.*

Mr. G. B. Longstaff studied the influence of grain cultivation and of grazing, respectively, on the development of the population of England.[11] He took into consideration in one part 56 registration districts of the three corn-growing counties of Essex, Suffolk, and Norfolk and in another part 65 registration districts of the four grazing counties of Dorset, Devon, Wilts, and Somerset. Both groups decreased—the grazing area from 1821 and the grain area from 1841—but their decrease is very noticeable only since 1851. The total decrease was 83,300 in the grain counties and 134,500 in the grazing counties. If one considered instead of the total population of the counties that of the districts examined, the proportions of decrease would be 13.8 per cent (grain) and 22.3 per cent (grazing).[12]

If one studies the agricultural populations in 1861 and 1891 in France and the extent of the grazing lands and the wheat lands in 1840 and 1894 . . . one will notice that in the west, where the agricultural population has increased, the extent of pasture lands has increased relatively little, but the cultivation of grains has increased a great deal. In the northwestern, northeastern, and north central areas the decrease of the agricultural population coincides with an extension of pasture lands. The same is true in the east; but in this region the vineyard crisis has been another cause of decrease. In the southeast the crisis in silk cultivation has acted in the same way and has counterbalanced the influence that the development of [grain] cultivation might have had upon the population.

Farm machinery.[13]—The industrial revolution, which changed the conditions of industrial labor, has changed those of farm labor also. Until very recently the processes and instruments of cultivation differed very little from those of antiquity and of the Middle Ages. If the agronomists of ancient times had returned to the world, they might have thought that nothing had changed since their time, and Virgil might have found the peasant of the last century using such farming implements as the Georgics describe.[14] But in our time, especially during the last half century, various kinds of machines having various applications have made their appearance in the country, and their use in agriculture has left a large number of persons unoccupied. Of all agricultural implements, probably none has competed more

[11] G. B. Longstaff, "Rural Depopulation," *Journal of the Royal Statistical Society,* Vol. LVI (September, 1893).

[12] In Belgium there were 60 agricultural laborers per 100 hectares in 1880, but the average, which was 97 in eastern Flanders, fell to 31 in Namur, a province where pasture lands predominate.

[13] For the historical development of agricultural implements see Pidgeon, "The Evolution of the Agricultural Implement," *Journal de la société royale d'agriculture de Londres,* Vol. I (1892).

[14] *Georgics,* I, 160.

with the rural workman than the threshing machine. It was threshing that kept the farm laborer busy during the winter. Lacking this resource, he had to look for work elsewhere and consequently had to emigrate. This statement is made by all agronomists, and some of them (in Germany, for example) have even suggested the proscription of the threshing machine in order to keep the workmen in the country.[15]

It is not in France that agricultural implements are best developed; England and the United States have precedence over us. But what progress, nevertheless, within the space of the thirty years from 1852 to 1882! In 1852 French agriculture had at its disposal only 60,000 threshing machines; this number had risen in 1882 to more than 210,000, or an increase of 250 per cent, but the average production of grain (that is to say, the produce utilized by these machines) increased only 10 per cent. And we are not speaking here of steam engines. These had barely made their appearance by the middle of the century (1,500 in 1852); but in 1882 there were more than 9,000 of them.[16]

The force exerted by these engines was equal to 46,600 horse power,[17] or almost 980,000 men. Such was the increase of force placed at the service of agriculture by the steam engine. We shall not draw the conclusion that the rural population had to decrease by exactly that number of workers. Such a calculation would be childish, and moreover, one must not forget that as a result of improvement in standards of living.[18] occupations are known in the country today that formerly were unknown. But it is nevertheless true that the development of farm machinery, steam or other, has been a causal element in rural emigration. . . .

As a rule, steam machinery is used preferably in regions of great cultivation, and the only alternatives left to the agricultural laborer are migration from the country and acceptance of a large decrease in wages.[19] Doubtless this explains why in the North, for example, the advance in farm wages since 1862 has been less noticeable than one might expect in such a rich department; the excess of births over deaths compensates for the vacancies caused by the competition with machinery, and as the number of workers does not decrease, the increase in wages is relatively small.

[15] See von der Goltz, *Ländliche Arbeiterklassen und der preussische Staat,* p. 145.

[16] We cite the data from *L'enquête agricole* of 1882.

[17] One horse power is counted as twenty-one men. This computation, which is that of the Administration of Mines, is adopted by De Foville in *Statistique de la France,* page 195.

[18] For example, baking and butchering.

[19] Von der Goltz states that in Germany the threshing of a centner (hundredweight) comes to a mark by flail, to 0.50 marks by machine, and to 0.25 pfennigs by steam engine.

The development of agricultural implements [20] in all western countries has been coincident with urban immigration; in very recent times its progress in Hungary coincides with an emigration movement such as has never been seen before. Southern Russia remains, to a large extent, apart from this progress,[21] which fact is one cause for the immobility of its rural population. But a day will come (and soon) when a wiser cultivation will free workers there also, who will have to find employment in industry.

Wages.—Among the economic causes of rural emigration the difference in wages must be mentioned. As a rule, rural workers feel themselves drawn to the industrial centers, where these are higher. Countries from which emigration takes place are for the most part those where wages are lowest, for they have not sufficient resources to afford remunerative occupation to all the workers that a high birth rate produces.

Not only farm wages, but industrial wages also must be considered if we are to judge the influence that they exert on the migratory movement. These wages, we find, are much higher in cities; whereas in 1882 the average rural wage in France was 2 francs, 22 centimes for men and 1 franc, 42 centimes for women, the coresponding figures in large industries were 3 francs, 58 centimes and 1 franc, 77 centimes in France except in the Department of the Seine. In the Department of the Seine in 1885 they were 5 francs, 45 centimes and 2 francs, 66 centimes.

In the scholarly work that we have cited more than once, Mr. Rauchberg has studied the influence of wages on migrations. He considers, on the one hand, three industrial districts in Bohemia, and on the other, four agricultural districts there. In the industrial group the wages for men vary from 80 kreutzers to one florin; for women, from 55 to 60 kreutzers. Immigration has the advantage over emigration by averages ranging from 19 to 26 per cent. In the second group, however, the wages of the men do not rise above 50, and those of the women not above 40 kreutzers, and there is an excess of emigration that fluctuates between 16 and 18 per cent. Emigration, therefore, is associated with decrease in wages (*Lohndepression*).

In Germany much work has been done on this subject.[22] Dr. Losch

[20] "Except in certain portions of western Europe and in North America, the agricultural machinery in use at the present time is scarcely in advance of that which was described by Herodotus nearly 2,000 years ago." Pidgeon, *op. cit.*

[21] One may get an idea of the processes of elementary cultivation in use even in the most fertile part of Russia when we say that the yield per acre is only 10 hectolitres, whereas in France it is 17.

[22] According to a study of Meyer in the *Allgemeines statistisches Archiv* for 1891, the average wages were 1 mark, 7 pfennigs in Prussia proper, an emigration country, and 1 mark, 85 pfennigs in Rhenish Prussia, an immigration region.

has made a summary, in connection with this problem, of the inquiry carried on in Württemberg. He considers also two regions of the kingdom: one exclusively industrial and another exclusively agricultural. In the first group in 1892 there were 52,605 laborers; in the second, 882; one cannot imagine, therefore, a more complete contrast. From 1883 to 1893 the average daily wage of adult workers in the industrial districts increase from 1 mark, 79 pfennigs (2 francs, 25 centimes) to 1 mark, 94 pfennigs (2 francs, 42 centimes), a gain of 15 pfennigs (8.4 per cent); in the agricultural districts the increase was only 6 pfennigs or 4 per cent (from 1 mark, 52 pfennigs to 1 mark, 58 pfennigs). Now almost in the same period of time (1880 to 1890) the first group gained 57,177 inhabitants, or 87.8 per cent of the total increase of the kingdom, whereas the second group lost 6,392 inhabitants, and all its districts except one suffered a decrease.[23]

One may also follow very easily the influence of wages on the population of miners in Durham and Northumberland from 1873 to 1891. At first wages rose in both valleys—they rose above 7 shillings per day in Durham and even above 9 in Newcastle—then they decreased proportionately in both cases towards 1879 to 4 and 5 shillings. In the same period the number of miners decreased by 4,000 in Durham and by 6,000 in Northumberland. In the last period wages increased to 5.11 and 6.2 shillings and at the same time the coal-mining population grew by 16,000 and 20,000 in the two counties, respectively.[24]

Decadence of small industries.—The failure or decline of small local industries may be a cause of emigration. Large industries have created, in fact, an absolutely new state of affairs. In the primitive state man manufactures everything for his own use. Then division of labor takes place and tasks become differentiated. Thus, the weaver formerly was indispensable to the village. Today great industries by mass production and cheap production have killed the small trades; and those who once engaged in them in the country have had to emigrate. Mr. Anderson Graham thinks that this social group has furnished a greater number of emigrants than the so-called rural classes—an exaggeration, evidently. But the same author speaks to us in picturesque terms of the disappearance of the small industries of former times. Where, he asks after a visit to his native country, are the tailors, the smiths, the carpenters of yesterday? [25] All those people have disappeared or are disappearing.

[23] See the very substantial monograph of Dr. Losch, *Die Entwickelung der Bevölkerung Württembergs, 1871–1890.*

[24] From the *Journal of the Royal Statistical Society,* 1894.

[25] Mr. Graham says humorously that the carpenter of the village "complains that but for the coffins he would starve." See P. Anderson Graham, *The Rural Exodus,* London, 1892, pp. 30, 38.

Moreover, Mr. Green [26] has made an interesting research concerning the conditions of small industries in England, and everywhere, or nearly so, he finds them in a state of decadence. Here it is straw-plaiting that is disappearing from the counties of Bedford, Buckingham, and Hereford; there it is the ribbon industry in Berkshire and the linen industry in Gloucester. Silk-weaving has disappeared from the country in Derbyshire, Hampshire, Chester, as well as in Norfolk; in Dorsetshire, glove manufacture has come to an end, and lace-making is decadent in the counties of Buckingham, Cambridge and Northampton.

Before Mr. Green, Mr. Schmoller had shown that the decadence of small industries in Prussia was at once a cause and a result of rural emigration. In 1849, for example, there were in the kingdom of Prussia more than 84,000 weavers (masters, employers, and workers); in 1861 their number was but 14,500. But while the number of laborers decreased by 70 per cent, the number of masters and employers decreased by 90 per cent. It was, therefore, the independent worker who was especially affected.

The development of means of communication.—The progress of means of communication, of railroads in particular, has had its influence on migrations. One cannot say absolutely that the railroad has caused migration, which has more profound economic and social causes. Even before there were railroads there existed strong currents of emigration towards Paris and other cities. The railroads, however, by facilitating the transportation of agricultural products to the large centers, have been able to stimulate production and thus to keep part of the population in the country. Such seems to be the case in the agricultural departments around Paris, that of Orléanais, for example, and also in the Center of Corrèze and of Haute-Vienne, which do not participate in the decrease of the *massif intérieur.*

It is with the development of railroads, however, that migrations assume large proportions, and that countries largely given over to agriculture see their population decrease, absolutely or relatively, to the advantage of the industrial centers. About 1850 Europe had only 23,000 kilometers of railroad, of which nearly half were in Great Britain alone; and England was, in fact, the country where urban concentration had made the greatest progress. In the other countries the total development of railroads was very small; it amounted to almost nothing in Switzerland and in the Scandinavian countries. . . . In 1870

[26] See Gustaf Schmoller, "Der Zug nach den Grossestädten vernichtet das kleine Handwerk," *Zur Geschichte der deutschen Kleingewerbe im 19 Jahrhundert,* Halle, 1870, p. 195.

there were in Europe more than 100,000 kilometers of railroads, and in 1890 the total was more than 200,000 (214,000 kilometers). . . .

The development of railroads has, moreover, a dual influence on the population: it stimulates the migratory movement towards cities and tends also to concentrate the population more and more along the railroad lines. A German statistician, Dr. Losch, has demonstrated this as it applies to Württemberg. In 1861 the population of this kingdom inhabiting the cities and towns served by the railroad was 17.7 per cent of the total; in 1871 it rose to 30.8 per cent; in 1890, to 44.5 per cent. It may be seen also from the work of the same author that Jaxt, the region that has experienced the greatest increase in emigration, is also the one in which railroads have made the greatest progress since 1861. The development of railways results not only in the depopulation of the country to the advantage of the large cities but in the decline of the small centers, which formerly influenced the neighboring region. We have as proof of this the sudden cessation of growth among our county seats (*chefs-lieux d'arrondissement*) of less than 5,000 population, dating from 1846.

Does rural emigration have causes of a moral nature?—May one assign to rural emigration still other causes than those of which we have just spoken, causes of a moral nature, for example? One sometimes hears mentioned, in connection with this matter, the development of education, universal military service, and the ennui produced by the monotony of rural life.

It is certain that an elementary education in which no attention has been given to vocational training may make the country dweller dissatisfied with his life and may convince him that any kind of occupation is preferable to the work in the fields, even if it has no other advantage than that it enables him to live in the city. But this applies only to a false conception of elementary education, not to the development of education in general. In fact it does not appear that the emigration movement in the different European countries is in proportion to greater or lesser diffusion of education. Have we not noticed the phenomenon of internal migrations in the Scandinavian countries, as well as in Belgium? And in France is emigration not noticeably more marked in our departments of the *massif central* and even in Brittany than in those of the valley of the Seine, where education is much more widespread? When the rural population becomes too numerous, nothing can prevent individuals from looking for work elsewhere; and if education is to be directly useful to the emigrant from the country, who could think of complaining about it? It is not education that is to blame, but most often the vanity of certain parents who believe that

they are bettering themselves socially by giving their children an education in harmony neither with their means nor with their destiny. An English song, mentioned in this connection by Mr. Hasbach,[27] describes the activity of the farmer of our days in contrast to that of the farmer of former days. "In 1767, it tells us, the farmer is at the plow, his wife milking the cow, his boys thrashing in the barn, his daughters spinning yarn, all happy to a charm. In 1870 the farmer's gone to see a show, his daughter's at the piano, his madam's gaily dressed in satin, all the boys are learning Latin, and a mortgage is on the farm."

We believe that it is incorrect to consider universal military service as one of the important causes of rural emigration. It is admitted that it puts the young peasant in contact with a more active life and with distractions that make him unfit for life in the fields. But is it not reckoning without a natural factor, a very strong one, too, namely, the love of the native land, which makes the discharged man—God knows with what happiness—look upon his village home that he loves so well? It would be necessary, moreover, to know whether the young people who remain in the city after their service is completed would have found an occupation upon returning to their village. Finally, military service is not a universal cause of rural emigration, since it occurs in a marked degree in countries where no permanent army exists—England, Switzerland, and Belgium.

The monotony of rural life may have its influence on emigration. In all ages it has been felt more or less; perhaps it is particularly felt in our day, now that ease of communication places the country dweller more directly in contact with the active life of the cities. This feeling seems to have been especially keen among rural workers of England, who generally live in cottages built near large estates and apart from the village.[28] Among them the solidarity is lacking that in our country unites the various families of our rural groups.

199. Paul M. Meuriot: Sex, Age, Civil Status, and Occupation of Migrants *

Comparison of migration between European countries with internal (rural-urban) migration, according to sex, civil status, age, and occupation.—On the bases of sex, civil status, age, and profession, immigra-

[27] See Wilhelm Hasbach, *Die englischen Landarbeiter in den letzten hundert Jahren und die Einhegungen*, p. 307.

[28] Mr. P. Anderson Graham writes that "There are very few Englishmen, whether living in towns or not, who are unfamiliar with the summer aspects of the English rural scenery. They have sat on some eminence and noted from the isolated smoke wreaths how straggled and distant from each other are the cottages." *The Rural Exodus*, p. 63.

* From Meuriot, *op. cit.*, pp. 436–439, 445–448.

tion of foreigners shows analogies to, or differences from, that of native-born persons. In regard to civil status, age, and profession similarities are found in the fact that among the foreign population unmarried persons, adults, and persons living by industry or commerce show high proportions. On the other hand . . . among the foreign migrants there is a preponderance of men or a tendency towards numerical equality between the sexes, a situation unlike that which exists among the internal (rural-urban) migrants, among whom women usually predominate.

In France, Germany, and Austria men constitute the larger element in the foreign colonies; their proportion in Germany is 545 per 1,000 foreigners; in France, 530; in Austria, 514. In Switzerland there is a slightly greater number of women (502 per 1,000). One notes . . . that the sexes tend to equalize in the countries where migration from foreign countries is more constant. This phenomenon is very noticeable in France and Switzerland; in France the proportion of men among the foreigners fell from 546 per 1,000 in 1872 to 530 in 1891. In Switzerland, where the feminine element has a slight advantage today, there were 561 men per 1,000 foreigners in 1860. . . .

In the principal foreign colonies in France, women are in the majority among the English and the Germans, who furnish a great number of servants, but the men have the advantage among those foreigners from whom laborers are recruited—Belgians, Swiss, and, above all, Italians. In Germany also it is among the Italians that men predominate.

In regard to civil status, celibates are in a much greater proportion [among the foreigners] than in the rest of the population as a whole, whichever sex is considered. The proportion of foreign celibates was 59.1 per cent among the men and 55.6 per cent among the women, while in France as a whole it was, respectively, only 54.1 and 49.3. In Paris the proportion of foreign celibates was 55.5 per cent for both sexes taken together, while in the total population it was 50.6 per cent.

The similarity between internal and foreign migration is more striking when one considers ages. In any population that is recruited by immigration there is, as we have seen, a preponderance of adults; this fact is still more evident in the foreign population. If one considers only the population aged from 20 to 39 years, the proportion is 29.3 per cent in France as a whole and 40.4 per cent in Paris. The proportion is 37.3 per cent among foreigners in France as a whole and 45.5 per cent among the foreign population of Paris. There is, therefore, a marked difference in favor of the foreign adults, and it would appear still more clearly if, instead of considering the total population, we

considered only the population of French origin: the proportion of adults in Paris would then fall to 37.5 per cent.

From the standpoint of their occupations there is still a similarity between immigration from without and internal (rural-urban) migration. It is industry, especially, that benefits from the elements brought in in both ways. The distribution of foreigners in France according to occupation is a good example.

Occupational Distribution of Native Frenchmen and of Foreigners Residing in France, 1891 *

Occupation	Total Number Engaged in Specified Occupation	Percentage Engaged in Specified Occupation	
		Of Foreign Population	Of Native French Population
Agriculture	236,080	22.0	47.0
Industry, commerce, etc.	787,953	68.4	40.2
Liberal professions	40,493	3.4	6.6
Rentiers	65,664	6.2	6.2

The foreign laboring population was considerable, including 340,000 persons.[1] Of this number 67 per cent were classified as being in industry, while of the total number of French laborers 45 per cent were so classified. Agricultural laborers composed 20 per cent of the foreign laboring population and 41 per cent of the population of France as a whole.

In Austria also the occupational distribution of foreigners indicates that they are in industry predominantly.[2] Of 1,000 foreigners gainfully employed, 124 were in agriculture, 341 in industry, 295 in commerce, and 240 in the professions. The great majority were employes, laborers, journeymen, and so forth; the employers or master (*Selbtständige*) constituted only 33 per cent of the foreign population.

Comparison of emigrants from Europe with other migrants according to sex, civil status, age, and occupations.—Transoceanic migration affords comparisons with intra-European migration with regard to sex, civil status, age, and occupation of the migrants. In both types men are in the majority, a situation unlike that which occurs generally in the

* See *Dénombrement des étrangers en France,* 1891.

[1] The industries in which the majority of foreigners are engaged are especially chemical production, mining, metallurgy, and building.

[2] See Heinrich Rauchberg, *Die Bevölkerung Österreichs, 1890,* Vienna, 1895.

migrations within each country. Suppose one considers the number of immigrants to the United States; one finds that men are more numerous. From 1881 to 1890, for example, 3,205,911 men arrived, or 61.10 per cent [of the total number of immigrants], and 2,040,702 women, or 38.90 per cent. But these proportions vary a great deal according to nationality. . . .

Since an increasing majority of the immigrants to the United States settle in the West, the states in that region have for the most part a marked excess of men.

As to civil status, although there may be great differences among different nationalities, the greater number of the immigrants are unmarried; the proportion is 83.4 per cent among the Swedes, 79 per cent among the Swiss, and 60 per cent among the Germans. The Germans, like the Irish, emigrate relatively more often as families than individually.

The distribution of emigrants according to age shows the same situation as we have just observed in all types of migration, namely, a great preponderance of adults.

When occupations are considered, it appears that only a minority of the immigrants to the United States have definite vocations, whether in the fields of business and the professions or in the skilled trades. Those who fall within this occupational category constituted only 10.35 per cent of the total emigration from 1881 to 1890. The remainder, exclusive of children, were laborers and servants of all kinds who had no definite vocational education (in other words, they were unskilled laborers).

Although there are a great many rural laborers among the immigrants, foreigners are found in greater numbers in industry and commerce. Thus, whereas agriculture in the United States claimed only 10.7 per cent of persons born outside America, 25.3 per cent were engaged in commerce and 31.9 per cent in mines and metallurgy. In short, transoceanic migration, like intra-European and internal migration, contributes a large number of persons to industry and to domestic service.

Thus the common characteristic of all these various migratory movements is established. Whether the emigrant goes to a city in his own country, to a neighboring country, or away from Europe, he obeys, on the whole, the same real or imaginary desire, that of ameliorating the conditions of his existence. There exists among the several types of migration a difference of method only, not of cause or of purpose; and their effects from a demographic and social point of view are usually identical.

200. Ernst F. Laur, Henry Nater, and Richard König: The Movement of the Rural Population Compared with that of the City Population *

Conditions in various countries.—The terms "city" and "country" do not have the same meaning in all countries. Although in certain states communities of 2,000 inhabitants are ranked as cities, there are other states in which the [lower] limit is 5,000. If each country under consideration keeps the same classification during the entire period of comparison, however, this suffices to enable us to follow in its large outlines the movement of the population. The period of this study begins in almost all countries in 1880 and ends in 1900 or a few years later.

We obtain, therefore, the following statistics for the twenty-one countries taken into consideration: [1]

Area	About 1880	About 1890
Urban communes	108,694,959	173,469,479
Rural communes	164,855,174	178,361,600
Total resident population	273,550,133	351,831,079
Percentage of total population in rural communes	60.27	50.70

These figures enable us to make the following calculations:

Area	Absolute Increase	Increase per 1,000
Urban communes	64,774,520	595.9
Rural communes	13,506,426	81.9
Total resident population	78,280,946	286.2

The following are the relative annual modifications that occurred in these two groups in the population of the several countries.[2]

* From *Mesures propres à lutter contre la dépopulation des communes montagnardes et rurales,* a report by Ernst F. Laur, Henry Nater, and Richard König on the importance and causes of the depopulation, presented to the Swiss Federal Department of Public Economy, published by Effingerhof in Bruges, 1919. Translated and printed with the permission of Dr. Ernst F. Laur.

[1] Ernst F. Laur, *La désertion des campagnes,* p. 16, a report presented to the Tenth International Congress of Agriculture of Gaud, 1913, and published by the Congress.

[2] Laur, *op. cit.,* p. 17.

ANNUAL INCREASE OR DECREASE PER 1,000 RESIDENTS IN RURAL AND URBAN COMMUNITIES IN THE SEVERAL COUNTRIES FROM ABOUT 1880 TO ABOUT 1900

COUNTRY	RURAL GAIN OR LOSS	URBAN GAIN OR LOSS
Serbia	+19.8	+42.2
Greece	+16.9	+33.6
United States	+14.2	+59.8
Rumania	+13.1	+25.7
Hungary	+ 9.6	+20.5
Portugal	+ 5.9	+15.6
Chile	+ 5.4	+31.3
Denmark	+ 5.2	+32.6
Switzerland	+ 4.5	+29.0
Canada	+ 4.1	+43.3
Belgium	+ 3.8	+23.1
Norway	+ 3.8	+23.5
Sweden	+ 2.4	+32.2
Austria	+ 1.8	+26.2
Germany	− 1.0	−34.4
England	− 1.7	−19.9
Scotland	− 2.7	−17.6
France	− 3.0	−10.5
Italy	− 4.3	−10.2
Ireland	− .9	− 5.6

It follows from these figures that it is inaccurate to speak of a depopulation of the country districts. Rural populations show an absolute decrease in only a few states of ancient culture. If we consider all the countries as a whole, moreover, we see an increase of about 80 per 1,000 in the course of approximately twenty years.

From the comparative standpoint, on the other hand, we notice a definite rural exodus, the city population having increased much more rapidly than the rural. Expressed in percentages, the proportion of country people as compared with the total population has decreased in all the countries considered above, declining, on an average, from 60.27 per cent about 1880 to 50.70 per cent at the beginning of the twentieth century. . . .

The marked increase of urban population, on the one hand, and the small increase in the population of rural districts, on the other, is not due to the *natural* movement of population—the excess of births over deaths. One must consider the artificial population process—the excess of immigrations over emigrations, and vice versa. . . .

Conditions in Switzerland.—The relationship between the natural movement of the population in the various economic groups in Switzerland and the artificial modifications it has undergone is as follows:

AVERAGE ANNUAL INCREASE OR DECREASE PER 1,000 RESIDENTS IN VARIOUS TYPES OF DISTRICT IN SWITZERLAND, 1888–1910

REGIONAL GROUPING	TOTAL		BY SURPLUS BIRTHS		BY IMMIGRATION OR EMIGRATION	
	1888–1900	1900–1910	1888–1900	1900–1910	1888–1900	1900–1910
Cities of more than 10,000 inhabitants	+27.8	+22.0	+9.7	+ 9.9	+18.1	+12.1
Essentially industrial districts exclusive of cities	+ 8.9	+11.5	+9.2	+10.6	− 0.3	+ 0.9
Mixed districts exclusive of Fribourg	+ 6.6	+ 7.2	+8.6	+10.4	− 2.0	− 3.2
Essentially agricultural districts	+ 2.5	+ 6.1	+7.5	+ 9.6	− 5.0	− 3.2
Average	+10.7	+12.5	+8.7	+10.2	+ 2.0	+ 2.3

Of an annual increase of 22 per 1,000 shown by the population of the cities from 1900 to 1910, 9.9 is due to excess of births; 12.1, on the other hand, to excess of immigrants over emigrants. This relationship was still more marked during the period from 1888 to 1900.

It is not, therefore, to the natural increase in the number of inhabitants that the cities of more than 10,000 owe their increase of population; for the most part it is to the growth of foreign and native immigration.

The population of groups other than cities, with the exception of the industrial districts during the period from 1900 to 1910, has not increased in proportion to the excess of births, for those districts have been depopulated by emigration. This artificial demographic movement, which means the infusion of new blood into the urban population by means of immigration from the country, is one of the most important phenomena in the lives of nations.

Though the statistics do not enable us to go into the details of these fluctuations of population, it is possible, nevertheless, to determine the result that these have had by comparing two censuses. The data for Switzerland show that for every 100 persons who moved from the "mixed" districts to those essentially agricultural, 157 moved from the agricultural to the "mixed" districts in the period from 1888 to 1900,

and 145 did so from 1900 to 1910. For industrial districts, the [comparable] ratio is 100:270 (100:219 from 1900 to 1910), while for cities it rises to 100:582 (100:551 from 1900 to 1910). If we reverse the ratio, we see that for 100 persons coming from agricultural districts to settle in cities, there are only 17 who leave the cities to settle in agricultural areas. The ratios are 100:26 (1888 to 1900), and 100:27 (1900 to 1910) for the mixed districts, and 100:37 and 100:43 for the industrial districts.

Thus, while the cities enjoy a great increase of population as a result of migratory movements from regions of different types, in their turn they yield only a very small number of emigrants. The disproportion in the case of the agricultural districts is particularly great. . . .

THE AGRICULTURAL POPULATION CONSIDERED AS A WHOLE

We have already examined the changes in the proportions of the urban and rural populations that have taken place during the last few decades. We will now consider them from the standpoint of occupation and will examine more particularly the movement of the agricultural population, since the agricultural is the principal element in the rural population and since, consequently, the expression "depopulation of rural and mountain communities" is used first of all as it applies to the decrease of the agricultural population.

Conditions in various countries.—The figures below give the annual increase or decrease per 1,000 in the agricultural populations of different countries for the period from 1800 to 1900. The figures in [the second column] show the movement in the rural population, which was given in a preceding table.

AVERAGE ANNUAL INCREASE OR DECREASE OF THE AGRICULTURAL POPULATION IN SEVERAL COUNTRIES, 1880–1910, PER 1,000 RESIDENTS IN 1880

COUNTRY	AGRICULTURAL GAIN OR LOSS	RURAL GAIN OR LOSS
Bulgaria	+16.0	.....
Austria	+ 5.2	(+1.8)
Denmark	+ 4.4	(+5.2)
Hungary	+ 3.9	(+9.55)
Belgium	+ .4	(+3.8)
Switzerland	− 3.0	(+4.45)
Norway	− 3.3	(+3.76)
Germany	− 3.8	(−1.04)
France	− 4.6	(−3.04)
Ireland	−11.1	(− .09)

Everywhere except in Austria the agricultural population has increased less rapidly or decreased more rapidly than the rural population in general. The agricultural population thus loses more people as a result of emigration to the cities and changes in occupation than do the other occupational classes living in the country.

Conditions in Switzerland.—An analysis of the data for Switzerland reveals, moreover, that the more industrialized the region, the more marked is the decrease of the agricultural population. This fact is seen from the following data. From 1888 to 1910 the relative decrease of the agricultural population per 1,000 was as follows:

DECREASE PER 1,000 OF THE AGRICULTURAL POPULATION IN DISTRICTS OF VARIOUS TYPES IN SWITZERLAND, 1888–1910

TYPE OF DISTRICT	DECREASE PER 1,000
Urbanized	253.8
Essentially industrial	150.7
Mixed	112.1
Agriculturally important	87.4
Predominantly agricultural	35.5

We see, then, that the agricultural population has decreased more where the districts are less agricultural in character.

THE SEVERAL GROUPS IN THE AGRICULTURAL POPULATION

We have set forth above the principal results of our research on the movement of the agricultural population considered as a whole. It is now important to examine carefully the details of the question and to determine which groups among the agricultural population are most affected by this decrease.

Conditions in various countries.—We compare below, for countries having usable census figures, the relative decrease or increase of the various groups in the agricultural population.*

We see that except in the United States the number of independent farmers everywhere either increased more rapidly or at least decreased less perceptibly than the other groups in the agricultural population. We see that in agriculture, in contrast to industry, it is not the laborers and employes but the independent farmers, that is to say, those who are their own masters and work for their own profit, who increased most rapidly. On the other hand, the number of agricultural employes

* EDITORS' NOTE.—The authors do not state whether these are annual or total rates.

INCREASE OR DECREASE PER 1,000 IN SEVERAL GROUPS OF THE AGRICULTURAL POPULATION OF VARIOUS COUNTRIES BETWEEN 1880 AND 1910

COUNTRY	AGRICULTURAL POPULATION		INDEPENDENT FARMERS	AGRICULTURAL EMPLOYES AND LABORERS
	Total	Active		
Bulgaria	+16.0	.....	.....	.....
Austria	+ 5.2	− 3.1	.....	−25.0
Denmark	+ 4.4	.....	.....	− 7.3
Hungary	+ 3.9	+16.5	.....	+ 6.2†
Belgium	+ .4	− 6.8	+2.3	−12.2
Switzerland	− 3.0	− 6.6	+ .5	− 7.3‡
Norway	− 3.3	− 7.1	.....	.....
Germany	− 3.8	+ 7.5	+3.3	− 6.4‡ − 7.2§
France	− 4.6	+ 4.1	+4.2	− 6.3‡ −18.3§
Ireland	−11.1	− 6.5	−4.5	.....
United States	.....	+29.7	+7.4	.....
Italy	.....	+ 6.1	.....	.....
Sweden	.....	+ 4.1	.....	.....
Netherlands	.....	+ 8.7	.....	.....

† Male ‡ Servants § Day Laborers

in all countries (that is, persons employed at a fixed salary) either decreased more than did the agricultural population as a whole or at all events did not increase perceptibly.*

Conditions in Switzerland.—The Swiss census gives the data for various classes of the agricultural population only since 1888; we can therefore follow the modifications discussed only for the period from 1888 to 1910.

First we distinguish in the agricultural population between persons living directly by agriculture and those living indirectly by it. By persons living directly by agriculture we mean the active agricultural population, which we differentiate further as independent agriculturists (that is, the exploiting agriculturists, proprietors, or farmers), members of the family working with them, and, finally, agricultural employes, classified in turn as servants and day laborers. By "other active persons" we mean in 1888 those who, in the terms of the census, were "in undetermined circumstances." For 1910, we include in this category those in workhouses and poorhouses, clerks, employed managers, and supervisors in agriculture.

* EDITORS' NOTE.—Guillou's study and our analysis of the American negro population reveal the same situation.

With persons living directly by agriculture we have contrasted another important group—those living indirectly by it, that is, persons who, without performing agricultural work, receive their living from it, because the person who supports them is engaged in agriculture as his principal occupation. We subdivide this category into domestic servants, members of the family occupied within the household, adult members of the family technically not gainfully employed, and children.

In the table below [page 587] we indicate the relative and absolute loss or gain of these different groups in the agricultural population and their proportions in the total loss or gain.

The total agricultural population has dropped from 1,092,827 in 1888 to 977,928 in 1910, thus decreasing by 114,899,[3] or 105.1 per 1,000. The parts taken by various groups in this definite decrease, however, differ a great deal.

Two groups even show a gain: the independent women agriculturists increased by 2,502, or 108.2 per 1,000, and the number of female members of the family working with the head of the farm increased by 16,694 persons, or 361.8 per 1,000. The increase in independent women agriculturists is doubtless due in part to the fact that men abandon agriculture to take up other occupations and leave to the women the job of managing the farm (Tessin). The very important increase in the number of women in the family who cooperate in the agricultural responsibilities is due partly to the difference in the methods of taking the census in 1888 and 1910 and partly to the fact that they have been pressed into service more and more on account of the increasing scarcity of servants.

The total increase in the two groups amounts to 19,196, as compared with the total loss, which amounts to 134,095, sustained by the decreasing agricultural groups. The difference between these two figures represents the net loss of agricultural population indicated above, a total of 114,899 persons.

The proportional decrease per 1,000 in decreasing groups varies greatly. The decrease is very small (9.8 per 1,000) among independent agriculturists, and slightly higher among male members of the family cooperating in agricultural work (19.5 per 1,000). The decrease in the other subdivisions shows differential rates, as the following data reveal: The number of adult members in the family not gainfully employed decreased by 44.7 per 1,000; the number of children by 72 per 1,000; of male servants by 78.4 per 1,000; of members of the family employed in the household by 239.1 per 1,000; of day laborers by 304.6

[3] The difference between these figures and those on [a preceding page] is due to the use of different censuses.

Population Gain or Loss in Several Agricultural Groups between 1888 and 1910

Groups in the Agricultural Population	Total Number		Absolute Gain	Absolute Loss	Gain per 1,000	Loss per 1,000	Proportion of Total Loss Occurring in Each Subgroup
	1888	1910					
Total active agricultural population	1,092,827	977,928	.....	114,899	....	105.1	.....
Males	568,024	525,543	.....	42,481	....	74.7	+37.0
Females	524,803	452,385	.....	72,418	....	137.9	+63.0
1. Persons living directly from agriculture	475,089	457,396	.....	17,693	....	37.2	+15.4
Males	382,880	356,849	.....	26,031	....	67.9	+22.7
Females	92,209	100,547	8,338	.....	90.4	....	− 7.3
(a) Independent farmers	210,331	208,257	.....	2,074	....	9.9	+ 1.8
Males	187,225	182,649	.....	4,576	....	24.4	+ 4.0
Females	23,106	25,608	2,502	.....	108.2	....	− 2.2
(b) Members of the family occupied on the farm	138,738	153,620	14,882	.....	107.2	....	−13.0
Males	92,597	90,785	.....	1,812	....	19.5	+ 1.6
Females	46,141	62,835	16,694	.....	361.8	....	−14.5
(c) Farm servants	71,247	62,112	.....	9,135	....	128.2	+ 8.0
Males	61,320	56,507	.....	4,813	....	78.5	+ 4.2
Females	9,927	5,605	.....	4,322	....	435.4	+ 3.8
(d) Day laborers	44,179	30,721	.....	13,458	....	304.6	+11.7
Males	35,258	24,406	.....	10,852	....	307.7	+ 9.4
Females	8,921	6,315	.....	2,606	....	292.4	+ 2.3
(e) Other active persons	10,594	2,686	.....	7,908	....	746.5	+ 6.9
Males	6,480	2,502	.....	3,878	....	605.2	+ 3.3
Females	4,114	184	.....	3,930	....	955.2	+ 3.4
2. Persons living indirectly from agriculture	617,738	520,532	.....	97,206	....	157.3	+84.6
Males	185,144	168,694	.....	16,450	....	88.8	+14.3
Females	432,594	351,838	.....	80,756	....	186.6	+70.3
(a) Household servants	16,114	11,021	.....	5,093	.....	316.0	+ 4.4
(b) Members of the farm family employed in the home	230,583	175,442	.....	55,141	....	239.1	+48.0
(c) Adult members of the family not gainfully employed	27,237	15,052	.....	12,185	....	44.7	+10.6
Males	11,998	7,452	.....	4,546	....	37.8	+ 4.0
Females	15,239	7,600	.....	7,639	....	50.1	+ 6.6
(d) Dependent children	343,804	319,017	.....	24,787	....	72.0	+21.6
Males	173,104	161,173	.....	11,931	....	68.9	+10.4
Females	170,700	157,844	.....	12,856	....	75.3	+11.2

per 1,000; of domestic servants by 316.0 per 1,000; of female agricultural servants by 435.3 per 1,000, and of "other active persons" by 746.5 per 1,000. In the case of these last, however, the decrease is due without any doubt to changes that took place in the methods of taking the census.

It is not sufficient, however, in measuring the relative importance of the decrease in various groups, to limit ourselves to a consideration of the change per 1,000; we ought also to consider the total figures and especially the proportion that they represent of the net loss. Thus we see that the number of persons earning a living directly by agriculture has decreased by 17,693, and constitutes, therefore, only 15.4 per cent of the total loss, whereas those supported indirectly by it show a loss of 97,206, or 84.6 per cent. The agricultural population supported indirectly by agriculture suffered the greatest loss. That is, those who, although supported by agriculture, are not actually occupied in this type of production decreased most. Consequently it is important to examine, in the first place, the modifications in the subgroups of this category.

The greatest proportional decrease was among the domestic personnel, the servants employed in the household. It is a well-known fact that it is particularly difficult to recruit hired women to manage an agricultural household. This is especially true with respect to certain unpleasant duties—for example, the feeding of pigs. The total number of domestic servants on farms was small, however; its proportion of the total loss amounts to only 4.4 per cent.

The proportions of the adult members of the family not gainfully employed and of children in the total decrease are much greater, namely, 10.6 per cent and 21.6 per cent. We should, however, deduct from the data for the children the [percentage of the] decrease due to the decline in the birth rate.

The proportional decrease in the number of members of the farm family employed in the household, on the other hand, is more than double the relative decrease in the agricultural population as a whole. The total decrease in this class was 55,141, or 48 per cent, almost half the total net loss to agriculture. This very important decrease is due only slightly to change in the method of taking the census. The census sometimes counted nonmembers of the family employed in the household as members of the family. We see, then, that the decrease in the agricultural population is due largely to the decrease in the number of members of the family employed in the household.

This decrease is due very often to the fact that the greater development of industry and the improvement of means of communication have opened new horizons to the agricultural population. The decrease

in the number of members of the family employed in the household, therefore, is due in a large measure to the migration of what is really a surplus of the agricultural population. People find themselves liberated as a result of the decrease simultaneously of agriculture and of agricultural self-sufficiency as far as food is concerned. In the epoch when agricultural activity was almost entirely concerned with production for home consumption, the household required a great number of women, the daughters of peasants. Today these seek positions in neighboring factories or leave the country and take up a nonagricultural occupation at an early age.

Let us now examine the modifications that have taken place among the several categories in the agricultural populations in the various types of districts that we classified above according to the amount of previous industrialization. We are justified in saying that the rate of decrease among persons supported indirectly by agriculture (domestic employes), and especially among members of the farm family employed in the household, has been greater in districts given over in a greater degree to agriculture.

The percentage of decrease among household employes is very high in districts that are essentially agricultural, for the number of members of the family [employed at home] has increased in purely agricultural districts. The decrease in the total agricultural population of these districts has come about because the number of household employes has decreased very rapidly.

In comparison with the decrease in the number of persons supported indirectly by agriculture, the decrease shown by those earning a living directly from agriculture is noticeably less, both absolutely and proportionately. Direct agriculturists are involved in a less degree in agricultural depopulation in purely agricultural districts. In urbanized districts the decrease among direct agriculturists plays a greater rôle, relatively, than in the less agricultural districts. This is the reverse of the rôle played by persons supported indirectly by agriculture.

The more a district has kept its agricultural character, the more has depopulation taken place at the expense of persons supported indirectly by agriculture, and the less has it taken place at the expense of those living directly by it. The group of purely agricultural districts even shows a slight increase of 190 active persons [direct agriculturists] or 2.8 per 1,000. In certain subgroups the proportional increase is greater; for example, such is the case in the mountainous districts of the cantons of Valais, Vaud, and Fribourg, where there is an increase of 70.3 per 1,000, and in those of the rest of mountainous Switzerland, where it is 46.2 per 1,000. Active agriculturists, however, have decreased in other groups of districts. This loss amounts to 2.6 per 1,000 in dis-

tricts where agriculture is important. It exceeds 4.1 per 1,000 in the mixed districts, is 91.1 per 1,000 in those where industry predominates, and, finally, is 196.8 per 1,000 in the urban districts. For the entire country the average is 37.2 per 1,000. (All statistics are for the period from 1888 to 1910.)

Although the decrease of active agriculturists may be perceptibly less than that of the persons living indirectly by agriculture, we ought nevertheless to examine it in detail, for it involves the group that is of the greatest importance in agricultural production, as well as in the conservation of the productive elements in the population.

The number of independent agriculturists here plays a rôle of particular importance; among agricultural exploiters (proprietors and farmers) it is a question, as their name indicates, of the risks that such exploitation entails. Their number was 210,331 in 1888, but by 1910 had decreased by 2,074, or 9.9 per 1,000, and totaled 208,257. This decrease, however, exists only in the first three groups of districts, and is as follows:

Type of District	Absolute Decrease	Decrease per 1,000
Urban	1,008	130.1
Essentially urban	2,092	61.8
Mixed	1,321	19.2
Total decrease	4,421	40.2

The decrease in the number of independent agriculturists in the three first groups of districts thus more than doubles the rate of decrease among independents as a whole. The only plausible explanation is that the number of independent agriculturists of other groups of districts, instead of decreasing, has increased. Such, in fact, is the case, as the following figures show.

Type of District	Absolute Increase	Increase per 1,000
Agriculturally important	272	3.9
Predominantly agricultural	2,075	70.8
Total increase	2,347	23.5

If we consider geographic subgroups of Switzerland, we find a slow decrease among agricultural independents in the mountainous districts, together with a rapid decrease of some other groups and a slow de-

crease of the agricultural population as a whole. In sections in the plateau region where the farms are large, there has been little increase in the total agricultural population; in the sections of the plateau where farms are small there has been a slow decrease. This situation is due to economic conditions in areas producing grain and wine.

One should not conclude from these statements that the decrease in the number of independent agriculturists in certain districts is caused by an absorption of the little farms by the large ones. In fact such an inference would be incorrect. The decrease of independent agriculturists in districts classified as urban, industrial, and mixed is explained by the appropriation for industrial purposes of lands in the neighboring agricultural territory. The agricultural districts as a whole and most of the subgroups, far from showing a decrease in the number of independent agriculturists, actually reveal an increase in this group.

Neither may we speak of a general decrease among members of the family working with the farmer; the number of men in this group decreased slightly but that of women increased considerably. We have seen, it is true, that this increase is due in a measure to changes in the methods of taking the census. The major consideration, however, is that more of the members of the family now help in the agricultural work than in the past in order to replace the hired laborers who have left. The group of "other active persons" is so heterogeneous that one cannot draw positive conclusions.

The loss suffered by the agricultural population among persons living directly from agriculture, therefore, concerns primarily servants, day laborers, and help outside the family.

This is certainly the case. The number of male domestic servants has decreased by 4,813, or 78.5 per 1,000, and of female domestic servants occupied in cultivation, by 4,322, or 435.4 per 1,000 (almost half the whole number in 1888). Furthermore, when we consider that the number of servants employed in the household has decreased also, we understand the complaints of agriculturists on the subject of lack of help and especially of female help. The decrease in the number of day laborers is very important also: 13,458, or 304.6 per 1,000. This class contributes 11.7 per cent of the net loss.

Now, if we group the figures for permanent employes of the farm and the household, as well as those for the day laborers, we obtain the [total for the] entire group of agricultural aids working at a fixed salary. This number decreased between 1888 and 1910 by 27,686, or 210.4 per 1,000. In the course of these twenty-two years, therefore, agriculture lost more than one-fifth of its employes. This decrease amounts to 24.1 per cent of the total decrease of the agricultural population—almost one-fourth of it.

The figures below indicate changes that occurred [between 1888 and 1910] among the several categories of employes in the various types of districts. They are rates of decrease per 1,000 persons similarly employed in 1888.

DECREASE OF SEVERAL GROUPS OF AGRICULTURAL EMPLOYES IN DISTRICTS OF VARIOUS TYPES IN SWITZERLAND, PER 1,000 PERSONS SIMILARLY EMPLOYED IN 1888

TYPE OF DISTRICT	MALE DOMESTICS	FEMALE DOMESTICS	DAY LABORERS	HOUSEHOLD SERVANTS
Urban	—220.9	—539.9	—439.5	—395.6
Essentially industrial	—140.9	—512.8	—404.9	—360.4
Mixed	— 81.3	—471.3	—317.7	—344.4
Agriculturally important	— 33.4	—403.1	—251.2	—273.4
Predominantly agricultural	— 29.8	—375.0	—189.2	—279.0

Among all types of employes, the decrease is much more perceptible in urbanized agricultural districts than in purely agricultural districts. The single exception, one type of household servant, is of little importance. The gradations are more noticeable among day laborers and male domestics than among female domestics.

If we study these changes in the subgroups of the agricultural districts, we find the following changes per 1,000 persons similarly engaged in 1888.

These figures do not explain the tendency for the mountainous regions to be situated more advantageously as far as the question of labor is concerned than the districts of the plateau. We do not understand this matter so we leave it unexplained. In some groups the numbers are so small that the changes may be fortuitous. The data, however, confirm the fact that the decrease in the number of agricultural aids is a widespread phenomenon and that it exists in a marked degree.

The causes of this exodus of agricultural employes are as follows:

1. *Wages.*—Although they have increased rapidly during these last decades, wages in agriculture are much lower than those in other occupations. An inquiry in 1906 by the Office of the Secretary of the Swiss Peasants' Union determined that the income of the agricultural domestic (money, food, and lodging) amounted to less than one-third of that of a qualified workman in industry and trade. On the other hand, the agricultural wage may not be appreciated at its true value. The farm workers compare it with that of the industrial worker without taking the value of the food sufficiently into account. They forget,

INCREASE OR DECREASE OF SEVERAL GROUPS OF AGRICULTURAL EMPLOYES IN IMPORTANT AGRICULTURAL DISTRICTS IN SWITZERLAND, PER 1,000 PERSONS SIMILARLY EMPLOYED IN 1888

TYPE OF DISTRICT	EMPLOYED MEN	EMPLOYED WOMEN	DAY LABORERS	HOUSEHOLD SERVANTS
Agriculturally important	− 33.4	−403.1	−251.2	−273.4
Mountainous regions	+ 93.3	−406.8	−123.3	−222.3
Cantons of Valais, Vaud, and Fribourg	+ 35.6	−505.2	+175.9	−210.7
Other cantons	+137.5	−344.3	−282.9	−229.5
Plateau districts of the larger farms	− 64.6	−420.0	−389.4	−281.9
Plateau districts of small farms	− 13.2	−325.7	−214.3	−328.8
Districts having extensive vine culture	− 61.5	−409.1	−266.8	−257.3
Predominantly agricultural	− 29.8	−375.0	−189.2	−279.0
Mountainous regions	+ 15.4	−334.3	− 23.5	−228.0
Cantons of Valais, Vaud, and Fribourg	−132.4	−471.4	−344.7	− 93.1
Other cantons	+156.9	−178.6	−310.5	−354.8
Plateau districts of the larger farms	− 42.1	−365.6	−331.3	−252.0
Plateau districts of small farms	+ 1.7	−491.5	+ 6.4	−374.1
Districts having extensive vine culture	−169.2	−635.3	− 17.9	−763.9

moreover, that often the higher wage of the urban or industrial workman is more than counterbalanced by the difference in the cost of provisions and especially by the high price of lodgings. The cash salary paid in industry, however, exercises a particularly powerful attraction.

2. *Hours of work.*—The number of hours of work, according to the inquiry mentioned above, was twelve a day in 1906. The working period is much shorter in industry. Moreover, the limited working hours and the Saturday liberty * are attractions that the introduction of the eight-hour day in industry would render still more irresistible for the rural workingman. Since agricultural labor is carried on in the open air and offers a greater variety than industry, it does no harm for the individual to keep longer hours. This is well known. However, this does not alter the fact that the shorter hours of industrial labor often induce the rural worker to abandon his occupation.

3. *Distractions.*—The urban environment and the shorter working hours are two factors increasing the tendency of the individual to seek

* EDITORS' NOTE.—This probably refers to partial holidays on Saturday in industry.

distractions and entertainments. Often this leads to the change in profession. Furthermore, in the city the workingman is less under the surveillance of friends and relatives and enjoys much greater freedom of action than in the country, where everyone knows him.

4. *Hope of good fortune.*—The rural domestic servant knows what awaits him if he remains in agriculture. At most he can hope to be a small farmer, and even this hope is very uncertain. He is fascinated, on the other hand, by the example of villagers who left for the city when young and penniless and who have been favored by fortune and have amassed great wealth. The secret hope of benefiting by a similar good fortune is one of the most powerful motives for emigration among rural working people. It makes little difference that of a hundred emigrants there is perhaps only one who really succeeds, that the greater portion of the others must remain factory workers for the rest of their lives, and that often the unfortunate ninety-nine may only have made a change for the worse.

5. *Hope of establishing a home.*—Agricultural domestic servants have much less chance of having their own homes than have the other elements in the population. A special study of the data of the census of 1900 has established the fact that of every 1,000 male domestic servants 829 are celibates, although of every 1,000 men engaged in agriculture only 459 are unmarried. This difference is still greater in the age group from 40 to 49; of 1,000 male employes in this group 656 are celibates, whereas of all men of the same age occupied in agriculture only 218 per 1,000 are unmarried. The unsatisfactory economic situation in which the agricultural domestic servant finds himself, and especially his lack of appropriate lodgings, of necessary land for the planting of potatoes and vegetables, and of opportunities to obtain gainful employment for his wife and children, make it very difficult for him to establish a home. As this is a goal that every young man sets for himself, many prefer to change their employment in order to be able to realize their desire.

In addition to the causes listed above, there are still others that contribute in a certain measure to the increase of the exodus of agricultural domestic servants. Let us limit ourselves to pointing out the absence in the country of insurance, of public aid in old age and infirmity, of public employment bureaus, of good schools, and of public protective agencies for the poor.

Motives of an economic nature are not the only causes of the decrease in the number of agricultural workers; there also are psychological factors deeply rooted in human nature. Moreover, these psychological factors are not the easiest to combat.

6. *Influence of the decrease in the agricultural population on agricultural production.*—The decrease of the agricultural population ought not, however, to lead to erroneous conclusions, for example, to the belief that there has been a decrease of production. On the contrary, production has increased very significantly during the last decades. The Office of the Secretary of the Swiss Peasants' Union estimated the value of Swiss agricultural production at 620,000,000 francs in the nineties and at 950,000,000 francs in 1911. Thus it increased by 330,000,000 francs, or 53 per cent, in the course of those fifteen or sixteen years. When the two amounts are expressed in terms of the same price level, there remains a net increase of production of 7 per cent. The per capita production * for active agriculturists was 1,320 francs in the first year [1888] and 2,130 francs in 1911.[4]

It appears from these facts that the part played by agricultural production in the economic life of the country, that of supplying food, has decreased comparatively less than has the ratio of the agricultural to the total population. The figures below confirm this.

Swiss Production and Consumption Statistics about 1890 and in 1910 and 1911

	About 1890	1910 and 1911
Total population	3,116,598	3,753,293
Active agricultural population	469,746	457,396
Proportion of total population engaged in agriculture	15.1 per cent	12.2 per cent
Value of food supplies consumed by Swiss population	824,000,000 francs	1,360,000,000 francs
Value of food supplies produced for domestic consumption	540,000,000 francs	803,000,000 francs
Percentage of Swiss food supplies produced in Switzerland	65.5 per cent	59 per cent
Total value of food supplies produced by Swiss agriculture for domestic consumption and for export	590,000,000 francs	910,000,000 francs
Percentage of total value of food supplies consumed in Switzerland represented by total value of food supplies produced	71.6 per cent	66.9 per cent

[4] For the years around 1890 we have based our figures concerning the division of produce on the average number of active persons listed in the censuses of 1888 and 1900; for 1911, on the data of the census of 1910.

COMPARISON OF DECREASE OF AGRICULTURAL POPULATION AND DECREASE IN RATIO OF DOMESTIC PRODUCTION TO DOMESTIC CONSUMPTION

Period	Percentage of Population Actively Engaged in Agriculture	Percentage of Native Consumption Produced at Home	Percentage of Total Value of Native Consumption Represented by Food Produced at Home for Domestic Consumption and Export
About 1890	15.1	65.5	71.6
1910 and 1911	12.2	59.0	66.9
Difference	2.9	6.5	4.7
Percentage of decrease	19.2	9.9	6.7

It is, of course, not the absolute but the proportional changes in these figures that show how the efficiency of Swiss peasants and of Swiss agriculture is advancing. By means of economic methods involving intensive cultivation it has been possible for a relatively small agricultural population (one, moreover, that has lost greatly in numbers during the last decades) to produce, nevertheless, from three-fifths to two-thirds of the total amount of food consumed by the Swiss. Doubtless we may estimate that during the War, as a result of the increase of production on one hand and the restriction of consumption on the other, this proportion has increased to three-fourths or four-fifths.*

201. ERNST F. LAUR, HENRY NATER, AND RICHARD KÖNIG: MEASURES INTENDED TO PRESERVE THE RURAL POPULATION †

The purpose of this analysis is to suggest measures to preserve the rural populations and to keep them on the soil. Let us, without paying especial attention to rural occupations other than agriculture, suggest certain measures concerning agriculture that may be utilized to keep a fairly large proportion of the population in the country. We wish to say, first of all, that this matter is primarily economic, for such factors

* EDITORS' NOTE.—This study was made in 1919.

† This reading is a summary of the conclusions given by Laur, Nater, and König, *op. cit.*, pp. 68–145. Its length and the fact that many of the detailed suggestions were applicable only to the local situation in Switzerland prevent us from giving the whole report. In this abridgment we have attempted to give the important conclusions that appear to have general application.

as love of the country, attachment to the soil, and economic lag in the long run will prove subordinate to the question of the comparative lucrativeness of agriculture and of other industries.

We classify our suggestions as to the rehabilitation and protection of agriculture in five groups as follows: (a) measures designed to affect agricultural land and real property; (b) measures designed to affect farming methods; (c) suggestions as to prices and markets for agricultural products; (d) suggestions as to the representation of agricultural interests in public life; and (e) measures concerning the moral and social well-being of agriculturists. Let us take up each class of measures separately and discuss the chief methods that have been used or that may be used to improve agriculture and thereby prevent the excessive migration from the country to the city. A section below deals with Switzerland in particular and summarizes the measures most applicable to that country.

A. In the first class, that of measures affecting agricultural land and real property, we propose thirteen kinds of improvement that will be beneficial.

1. A number of improvements suggest themselves as a result of a study of the climate. Better weather reports and wider dissemination of knowledge concerning the relationship between climate and successful agriculture will be helpful. The forests must be preserved and protected, and reforestation must take place when necessary. Methods of forecasting and preventing hailstorms might be given a trial. The possibility of raising crops that will stand up under hailstorms offers some hope. The draining of swamps is desirable in some places. A study of the adaptation of plants to climates is needed. It may be possible to adapt new subspecies and varieties to climates in which originally they would not grow.

2. Any country may try to extend its cultivated land. Sometimes this means acquiring more territory or colonies. Within any particular country, however, uncultivated land may be brought under cultivation by a change of method. Certain land may be given more intensive and profitable cultivation than it now receives. All measures designed to prevent erosion and waste of the surface soil, especially in areas of high rainfall or in the mountains and rough lands where the erosion is bad, will increase the cultivated land.

3. All sources of water supply must be guarded and the dangerous effects of floods and washouts must be eliminated as far as possible.

4. Colonization of the land by inhabitants of the nation itself is very desirable. The state lands may be settled by means of colonization or homesteading. Large farms may be broken up into small ones or settled by tenants. The breaking up and parceling out of small farms may

be prevented; and attempts may be made to reunite the lands already cut up into strips and areas too small for successful farming.

5. In countries where communal or cooperative groups, such as corporations or villages, have certain land rights that are being encroached upon by other agencies, measures may be taken to prevent the depopulation caused by spoliation of the land of the village or commune. Such measures are especially desirable where large estates or cities are encroaching upon village or communal property. Legal measures, such as exact titles to the land, and preservation of peasant rights, which once were registered only in common law and custom, will prevent some of this depopulation.

6. Steps may be taken to improve the land-mortgaging and credit system. Land banks may be organized, legal rates of interest for credit on land mortgages may perhaps be set, official landmarks may be recognized and established permanently. New surveys to establish exact titles under supervision of the state will be valuable, for accurate descriptions of all property will prevent loss that might result from a faulty title.

7. Certain measures may be taken against excessive mortgaging of the land and other undesirable practices. We wish to prevent high indebtedness. It is suggested that a legal maximum be set to the ratio between the amount of the mortgage and the value of the land, and that this be not exceeded. It is even possible that laws might be passed regulating the maximum value of the land according to its average yield. Finally, measures seeking the amortizement of debts against land will be generally beneficial.

8. Measures may be taken to regulate the sale of farms and immovable property and to protect the land titles now in the hands of farmers and peasants. Among other measures we suggest title guarantees, some restriction of the right to sell land unless it is done under some form of wise public supervision, and certain rural credits, provided to help the small farmer to acquire and own a farm.

9. Studies of legal rights concerning inheritance of landed property and rural succession might yield some valuable suggestions. If the farm were small, one child might be legally named by the parents to inherit it. The settlement of the share due the other children, if one child inherited the farm, might be legally determined on the basis of a yield value of the land rather than that of market value.*

10. Rental methods that would improve the stability of forms of

* Editors' Note.—Here the authors discuss a problem that has been particularly prominent in many countries and that arises from the fact that land values have held a ratio to yield much greater than the comparable average that obtains in most industries. A farm having a net yield of $1,000 a year has generally been valued much higher

tenure other than ownership by the peasant or farm operator might be developed.

11. Protection might be given to the public domain, especially the communal holdings of the villages and the grazing lands of peasants not residing in the village.

12. Projects might be developed to improve the soil, especially in the field of rural engineering, and the right of the majority to put through public improvements of the soil in spite of the objections of a few persons might be established. This project includes also the study and development of methods of financing improvements of the soil.

13. Aid might be obtained for the construction of rural dwellings, the advancement of education, and the establishment of permanent improvements on the land. Such programs might include help in the financing of these permanent improvements.

B. The next series of improvements that we suggest concern farming methods.

1. Agriculture may be developed as a science; * research methods may be applied to the problems of agriculture; rural secondary and higher schools for agricultural education may be established; the rural press, agricultural fairs, and other agencies of adult education may give instruction on the subject of agricultural technique.

2. A series of measures may be taken to improve the conditions and regulate the supply of farm labor. These would include the establishment of employment bureaus and workers' houses, the facilitation of marriage and promotion of family life among rural laborers, and the passing of a number of special measures that would attempt to make the life and work of the hired man on the farm pleasant and stable.

3. Another series of measures attempts to help the farmer obtain capital with which to operate his farm. These measures concern the use of machines, the financing of these machines, the purchase of better plants and animals, the development of the system of intermediate credit banks, and so forth.

4. It is desirable to improve the culture of plants by the use of better varieties, the more intensive cultivation of the crop land, the development of home gardens, wood lots, vineyards, and fruit trees.

5. Similarly, it is possible to improve the conditions associated with the breeding of animals on the farm, by the selection of the more productive varieties, for example, and by diversified agriculture.

than other pieces of property having similar yields. Urban business considers itself inflated when during certain boom seasons important stocks sell for 50 times their yield. Farm lands, as a result of a number of factors impossible to discuss here, may go on for generations selling at 30 to 50 times their yield.

* EDITORS' NOTE.—This is done at agricultural colleges and experiment stations in the United States.

6. Research is needed in connection with agricultural by-products and with industries associated with agriculture. All the processing that is done on or near the farm may be improved. Development of the by-products will help make agriculture profitable and will minimize social waste in the use of agricultural products.

7. A series of improvements is needed in the matter of eliminating parasites that prey on animals and plants on the farm. [In the United States such animals and insects as the wolf, the boll weevil, and the corn-root borer are examples.]

8. Improvements and new plans are needed in agricultural insurance. Fire, hail, pests, disease, sickness, accidents, invalidism, and death are some of the hazards not fully provided for under the present systems of insurance for farmers in most countries.

9. Finally, the whole problem of agricultural taxation needs study, revision, and reform.

C. Prices of agricultural products and agricultural marketing may be regulated by a better organization of markets and of market information for the benefit of farmers and of others also. Cooperative enterprises will facilitate marketing and keep up prices, especially if well managed. The problem of transportation needs considerable study. Railroad rates, the improvement of roads, and water transportation problems important to agriculture need to be studied. In addition, there is the problem of improved telephone, telegraph, and radio service. Governmental supervision of weights and measures and of market quotations is necessary. Tariffs, which vary in different countries, may be modified advantageously. Fluctuation in the value of paper money, as has been demonstrated in postwar Europe, makes it necessary for some countries to try to stabilize the currency in rural districts, where the period is a long one between loans for production and returns from sales. Agriculture may be encouraged in many cases by the granting of monopolies (such as public utilities receive) to groups of farmers. The fixing of prices by the state is important, but we believe that the greatest caution must be exercised in this field, for it frequently leads to unwise political disturbances and agitations.

D. We suggest a better representation of agriculturists in national affairs and public life.*

E. Measures promoting the moral and social life of the countryside may be classified as relating to the improvement of conditions in regard to food, heat, clothing, housing, and lighting, the advancement of health and hygiene, and the development of family life, moral and religious life, social organizations for purposes of recreation, and finally,

* Editors' Note.—The authors offer this suggestion with no comment. Its importance cannot be overestimated.

an interest in economizing and saving. In order to improve food conditions it is suggested that more and better courses be offered in home economics and cooperative purchasing and that greater emphasis be laid on home production of foodstuffs. Improved methods of lighting and heating homes are needed. The chief problem in Europe in connection with clothing concerns the disappearance of the various national costumes, which were beautiful and economical, and the increasing use of manufactured clothes that have neither beauty nor charm. Nor are they economical as compared with the native costumes, which members of the farm family made in their spare time. The present authors favor the preservation of the national costumes in a somewhat modified and more hygienic form.*

Model plans for housing are needed. A study of hospitals, rural physicians, and health conditions in the country ought to show how to improve health and hygiene. It is recommended that family life receive reinforcement from without to prevent its decay, but no suggestions as to specific measures are made. Rural recreational organizations are needed, such as hunting clubs, gymnasiums, singing or other musical societies, lectures, and theaters. Savings banks and investment companies will help to maintain and develop a saving, economical habit of mind.

The peasant family is indeed the mother of the race, the fountain of youth that assures the perpetual rejuvenation of both agricultural and nonagricultural populations. The city draws its strength from the country. The best assurance of continued life and of the infusion of necessary new blood that the urban centers can have is a strong rural hinterland constantly furnishing new immigrants to the city. The cities cannot afford to get too far away from their source.

If we consider Switzerland specifically, we observe first that the number of peasant families is practically the same as the number of farms. Consequently the problem, first of all, is to increase the number of farms. Our studies show us that in most parts of Switzerland a peasant family consisting of the equivalent of four adult workers (two or more parents and grandparents and several small children) usually owns from 8 to 12 hectares. The average amount of cultivated land is about 10 hectares, an area sufficient to keep the peasant families busy and happy and to enable them to maintain a high cultural standard. We propose, therefore, that the government create a large number of these small farms, following the methods already outlined in the first pages of this reading. These peasant farms may be

* Editors' Note.—André Borel, also of the Swiss Peasants' Union, has written the editors in detail concerning the Swiss plans for the revival and preservation of the Swiss national costume.

tenanted by the younger sons of farmers and peasants and by well-recommended and industrious farm laborers.

Another valuable measure designed to check rural depopulation is the development of small farms in the neighborhood of manufacturing cities. Laborers will reside on the farms and raise part of their food there, obtaining their principal income, however, from their work in the cities near by.

We conclude by saying that the most important measure to prevent the desertion of the countryside is the development of a political and economic system that will guarantee a fair remuneration to the peasant. It ought, in principle, to guarantee the peasant who organizes his enterprise in a rational way and makes an increasing use of modern scientific methods a normal price that will enable him to realize at least 4 per cent on his investment and earn as much by his labor as a skilled industrial worker. Such prosperity, in addition to the security to the family that agriculture affords, will constitute a powerful attraction for the farmer-peasant and will prevent an excessive rural exodus.*

202. Austin B. Hill: Internal Migration and its Effect upon Death Rates†

In an endeavor to throw some light upon this problem the Industrial Health Statistics Committee have set on foot the present inquiry, to obtain a more accurate comparison between rural and urban conditions of life than has yet been prepared, and to trace the after-histories of residents and migrants from the standpoint of health. . . .

Some medical and statistical authorities have attributed considerable importance to migration as a factor of variation in mortality rates. Sir William Hamer in his presidential address (1912) to the Epidemiological Section of the Royal Society of Medicine (on the "Influence of Migration upon the Phthisis Death-Rate") maintained that better feeding, improved housing, and the like cannot account for the whole decline of the phthisis death rate. "After taking into account the nomenclature difficulties, there is still an unexplained decline. To what is it due?" For the answer, he says, the question of migration must be studied. . . . The quality of the migrating population, he asserts, must be, to an important extent, responsible for the occurrence of low death rates from all causes and low phthisis death rates in rapidly growing

* Editors' Note.—It need hardly be explained that in the foregoing condensation of a study 77 pages in length we have had to take considerable liberties with the material. Those who wish more details, however, may consult the original study.

† Adapted from Austin B. Hill, *Internal Migration and Its Effects upon the Death-Rates: with Special Reference to the County of Essex* (Privy Council, Medical Research Council, Special Report Series, No. 95), pp. 13, 14, 15, 25, 26, 27, 35, 36, 40, 42, 49, 50, 53, 54, 57, 75–76, 81–82, 83, 90, 114, 117, 123–124.

and prosperous towns. The dissimilarities in the phthisis death rates of the various countries of the world, Sir William Hamer suggests, may be explained if it be assumed that countries in which rapid industrial progress is being made tend to throw off by emigration "the less resistant portions of the population," while countries in which little progress is being made or prosperity is actually declining tend rather to lose the "more resistant portions of the population.". . .

The late Mr. T. A. Welton threw some light upon this influence of migration upon the mortality rates of various districts of England and Wales in a paper contributed to the *Journal of the Institute of Actuaries* 50 years ago. . . .

Welton considered then, as Sir William Hamer does now, that there was a difference in quality, as well as in quantity, of lives at different ages, and that the effect of migration was that the remnant which remained behind in the rural districts was not only deprived of those persons who were strongest and most enterprising, but in addition this residuum received back a number of migrants who had lost their health in the towns as well as a certain number of sick persons born and bred in towns in search of healthier conditions in the country.

In this paper Welton discussed the possibility of tracing the after-histories of migrants from a few rural registration districts, where the death rates among females at the migrating ages were excessive, with the object of determining how many of them contracted disease whilst in London or some other town, and in consequence had returned to their native place. The present inquiry has been conducted on similar lines. Details of the after-histories of migrants of both sexes have been collected, together with, for purposes of comparison, details of health and occupation of their near relatives who have remained in the country districts. The field of inquiry has been confined to the rural areas of the county of Essex. . . .

[A study of migrations from Essex, including a table, follows.]

This table reveals that the agricultural population of Essex for the past 80 years has had to sustain losses both consistent and of considerable magnitude. The total decrease of population due to migration from the most rural areas—Ongar, Chelmsford, Maldon, Tendring, Lexden, Witham, Halstead, Braintree, Dunmow, Saffron, Walden, Sudbury, and Bishop's Stortford—amounts during these 80 years to 181,944, and with very few exceptions this flow of population is unchecked throughout the whole period. . . . The registration districts that show an increase are those bordering upon or serving London. . . .

From 1901 to 1911 the outward flow of population from the rural areas was reduced to a very small proportion of the movement in the previous decade. The migration from the most rural districts enu-

merated above amounted during 1891–1901 to 24,418; from 1901 to 1911 the outflow fell to 2,345, less than a tenth of the movement in the previous 10 years. . . .

Stress must be laid not only on the quantity of migration, however, but on the quality as well. The majority of the migrants are young men and women between the ages of 15 and 30 years in search of a better means of livelihood than the rural villages can offer. The result of this movement is to give rise to an abnormal age distribution, to which consideration must be given before account can be taken of the death rates. . . .

Just as there is a dearth of young persons in the Essex rural districts, so, at the same ages, there is an excess of actual over expected population in London. The largest excess of males is centered round the ages of 22½ and 27½ years, of females round the ages of 17½, 22½, and 27½ years. . . .

It is not only the age distribution in the rural districts that is made abnormal by the movement of the population. The migration of the males exhibits dissimilarities from the migration of the females. The result is a disturbance of the distribution of the sexes. From the preceding tables it has been shown that the main flow of male migrants is centered round the ages of 17½ and 22½ years, while the movement of females begins five years earlier—round the central age of 12½ years; the volume of female migration is in excess of the male at early ages.[1] The effect of previous migration is shown most in groups 20 to 25 and 25 to 30 years for males, while it begins to be shown at 15 to 20 years for females. . . .

Some indications of the direction of the flow of migration from Essex can be gathered from a tabulation of the number of persons who were born in Essex, but at the date of some census were enumerated as being resident, at the time, elsewhere. . . .

In 1861, out of the total number of persons who were born in Essex but on the day of the census were found to be elsewhere, 59 per cent were enumerated in London, while in 1901 the corresponding figure was 44. . . . In 1901 the flow of migration is, similarly, mainly into London itself, while the movement into the suburban area has, with the growth of London, substantially increased. . . . In 1901, out of the 229,466 persons who were born in Essex but were numerated elsewhere 111,684 were found to be in towns or urban districts of over 50,000 inhabitants (including London). That is, 49 per cent of those persons

[1] Due, at least in part, to the earlier arrival of females at adolescence. Restlessness for moving is probably associated therewith. The males follow the females, in addition to being impelled to move in search of their livelihood.

who had left Essex were in densely populated areas. If London be excluded, 8 per cent of the remainder are found in these areas. . . .

The movement of this rural population is, as has been seen, of substantial proportions; it affects both age and sex distribution in the area under consideration; it remains to be seen whether it affects the mortality rates. . . .

[The total death rates for London and the rural districts are presented at this point. The data are summarized in the following table.]

AVERAGE ANNUAL DEATH RATES FROM ALL CAUSES, 1901–1910, EXPRESSED AS PERCENTAGES OF AVERAGE RATES FOR 1851–1860, FOR LONDON AND FOR TEN RURAL DISTRICTS OF ESSEX

AREA	AGE									
	0–5	5–10	10–15	15–20	20–25	25–35	35–45	45–55	55–65	65–75
	Males									
London	66	37	47	49	49	57	68	80	83	79
10 rural registration districts ..	51	39	40	36	40	54	64	78	89	86
	Females									
London	64	39	52	46	45	49	64	77	77	76
10 rural registration districts ..	50	32	28	29	32	39	45	62	70	80

There is certainly a suggestion that at these age groups some influence, apart from the general improved medical knowledge and application in the fifty years' period, is tending to depress the rural rates, and to raise those for London; in other words there is some ground for belief that the lessened volume of migration has reduced the level of the mortality rates at these age groups in the rural areas, and has increased similarly the rates for London; that the fall of the male curve between the ages of 15 and 30 and the enormous fall of the female curve between the ages of 10 and 30 are not due merely to the relative advantages given to rural communities over urban by increased knowledge and extended sanitary precautions (e.g., by the practical abolition of typhus, which more greatly affected the rural districts under study, in 1851–1860, than it did London); but in part are caused by some other influence which may be found in the lessened flow of this rural population to London.

[Here the author discusses the death rate from phthisis alone. These data are summarized in the following table.]

AVERAGE DEATH RATE FROM PHTHISIS, 1901–1910, EXPRESSED AS PERCENTAGES OF AVERAGE RATES FOR 1851–1860, FOR LONDON AND FOR TEN RURAL DISTRICTS OF ESSEX

AREA	AGE									
	0–5	5–10	10–15	15–20	20–25	25–35	35–45	45–55	55–65	65–75
	Males									
London	35	26	26	39	44	51	62	72	75	76
Rural registration districts	9	10	15	32	35	46	50	49	59	53
	Females									
London	31	29	36	38	34	36	46	54	59	66
Rural registration districts	12	18	18	22	22	26	22	19	28	53

One the whole, these figures offer no definitely positive or negative evidence of the effect of the diminished flow of migration upon the phthisis rates of the rural districts and London. Changes of nomenclature mainly affecting the very early and later age groups (and only slightly affecting the adolescent age groups) make it impossible to measure accurately the relative fall in the phthisis death rates at the different ages over the long period of time under discussion.

A more detailed study of the mortality rates from all causes of death and from phthisis in the county of Essex might reveal whether the check to migration from 1901 to 1910 has had a substantial effect on the death rates of these districts. . . .

If migration is the major cause of the high death rates at adolescent ages in the rural areas, then a greater departure from the normal should be expected at those age groups in those districts from which migration has largely taken place than should be found in those districts from which the flow of population has been relatively small. . . .

From this summary [omitted] it is obvious that the abnormalities in the death rates of these districts over the period of 1851–1910 are not consistent enough to enable definite conclusions to be drawn, but that they do afford certain evidence of value. (1) The abnormalities take the shape of "humps" in the death-rate curves, these humps appearing nearly invariably in the age groups at which the major amount of migration must take place. (2) The humps relating to the death rates of individual districts are by no means proportional to the migration rates of these districts, but with the grouped districts there is a very slight indication that those groups with the highest migration rates show the highest hump—except when the migration rate reaches a

very high figure, when the death rates again become smooth, a fact which fits in with the theory that the migrants are normally a select population. (3) As a whole, districts with death rates which showed distinct humps in the early decades have less irregularity in 1901 to 1910, when their losses have ceased or been converted into gains. . . .

A further means was adopted to measure any possible connection between the high death rates and the migration of population observed in these districts at these age groups. The migration rates (distinguishing male and female) of these eleven districts in each of the six decades considered (making 66 rates for each sex) were correlated with the corresponding death rates (from all causes) in the age groups (1) 15 to 20 years, (2) 20 to 25 years, and (3) 25 to 35 years.

To overcome the secular change apparent between 1851 and 1911, the actual migration and death rates were not used. Instead the mean migration rate and mean death rate of the eleven districts in each decade were found and the deviations of the individual rates from these respective means then calculated. These deviations were the values used. . . .

[The following correlations between migration rate and death rate were found for men.]

15 to 20 years	$+.1091 \pm .082$
20 to 25 years	$-.1702 \pm .081$
25 to 30 years	$-.2831 \pm .076$

[For women, the following correlations were found.]

15 to 20 years	$-.2776 \pm .077$
20 to 25 years	$-.4101 \pm .069$
25 to 35 years	$-.2639 \pm .077$

. . . Taking this evidence as a whole—the examination of the death and migration rates for each individual district, the examination of similar rates for grouped districts, and the indications afforded by these correlation coefficients—there does seem to be a presumption that the migration of adolescent population is at least partially responsible for the higher death rates in these age groups in the rural districts of Essex. . . .

To be enabled to follow up the history, from a health point of view, of migration from rural villages, it is obviously essential to enlist the sympathy and assistance of persons who, from long residence in the neighborhood, have an intimate knowledge of the families in question, and can approach them without arousing their natural suspicion as to the motive. . . .

The most fruitful source of information was considered probably to be found in the clergymen and schoolmasters of the villages. . . . Often

where the clergyman was unable to assist he gave an introduction to some social worker in his parish or to the schoolmaster. . . . The families of which the details are given all conform to one type—families of which one or more members have become residents of towns (urban districts were considered to be "towns"), while other members of the same family have remained resident in or near their rural homes. . . . Information regarding the whole family was required, for the state of health of the homekeeping children must, as far as possible, be used as a standard of comparison. . . . In all, records were returned from some 55 villages, but unfortunately many of these cards were inaccurately filled up, while in some cases cards relating to parents and to school children under 13 years of age (the earliest age at which migration was recorded) had been included. When such had been rejected, there remained the records of 402 males—182 migrants and 220 living at home; and 367 females—204 migrants and 163 living at home. . . .

In Table II is given a comparison between the figures obtained here and those given (in 1890) by Sir Hubert Llewellyn Smith in his article on the "Influx of Population" into London.[2]

TABLE II

PERCENTAGE OF TOTAL MIGRANTS OF BOTH SEXES IN EACH OF FOUR AGE GROUPS

AGE GROUPS	CHARLES BOOTH'S INQUIRY, 1890	ESSEX INQUIRY, 1923
Under 15	5	14
15–25	80	70
25–30	9	11
Over 30	6	5
All ages	100	100

An analysis of the cards collected in the Essex inquiry reveals that out of the 182 male migrants only 7 returned home, and of these but one on account of illness (after a year and a half as a motor engineer's apprentice). Of the 204 female migrants 5 returned home, of whom one returned to die.

Verbal evidence was to the effect that very few migrants returned home on account of loss of health. The figures are too few to afford any definite proof, but the impression must be that though the rural

[2] Charles Booth, *Life and Labour of the People in London*, 1st series: *Poverty*, III, 139, footnote. The grouping is that given there.

death rates are probably somewhat affected by the return home of a few sick migrants, the number of these is by no means sufficient to account for the discrepancy between the rural and urban rates at adolescent age groups. . . .

The truth of the theory put forward that the migrants do not often return home to die, but are on the whole "better lives" than the homekeepers, can be tested, to some extent, by the construction of life tables for those migrants and homekeepers, the records of whose after-histories were obtained in Essex.

The number of cards sufficiently detailed for the purpose amounted to 402 relating to males (of whom 182 were migrants), and 367 relating to females (of whom 204 were migrants).

[Some statistical computations of "life tables" follow.]

In other words, the life tables do indicate that the migrates die at a slower rate than their relatives in the country. The figures are not very large (though the years of exposure, it will be seen, are not inconsiderable) but the results for both males and females are very similar. Whereas the expected deaths of male homekeepers and migrants are 20 and 14, respectively, the observed deaths are 16 and 4; whereas the expected deaths of female homekeepers and migrants are 13 and 11, respectively, the observed deaths are 15 and 2. There is a distinct "deficiency" of deaths of migrants in each case, a deficiency that appears too great to have arisen solely by chance. . . .

The conclusions which are suggested by this study of the after-histories of both migrants and homekeepers may be summarized as follows:

(1) The male migrants to towns move into various occupations, but more especially towards work of an "outdoor" type, the conditions of which more closely approximate to those of their old rural environment. This tendency, according to the findings of Llewellyn Smith, was still more apparent forty to fifty years ago (pp. 84–86, Table IV).

(2) They move to work in which they secure high pay relative to the earnings which they could obtain in the rural districts; and frequently to work which they have definitely secured before leaving their homes; Llewellyn Smith believed that only a small percentage fell into poverty and distress or were to be found in work of a casual nature, such as dock labor of the last century (pp. 87–89, Tables V, VI).

(3) The female migrants move largely into domestic service of a high-class type, where it is probable that they are, as a class, well housed and well fed (pp. 84–86, Table IV).

(4) Few migrants of either sex are to be found in the really badly housed parts of London (based upon Llewellyn Smith's results, p. 86).

(5) As a rule it is the brighter and stronger (mentally, if not physi-

cally as well) of the young men and women in rural districts who tend to migrate; in the country villages there remains the weaker element (pp. 87 and 90–91).

(6) The general evidence suggests that only a relatively small number of migrants fall ill and return home to die: while the fact that a country nucleus, once established, grows with rapidity by the importation of friends and relatives (as indicated in the Essex inquiry, and definitely accepted by Llewellyn Smith in his investigation), must give rise to the assumption that the contraction of diseases in the towns by the migrant cannot be a common result of movement (pp. 88–90, Table VI).

(7) Of the male homekeepers a large part are, naturally, employed in agriculture and similar occupations. Of the females many are in domestic service. A smaller proportion of each sex find work in the towns of Essex, which lie close to their homes (pp. 91–92, Table VII).

(8) The death rates, as recorded by the registrar-general, prove that agriculture in itself cannot be an occupation detrimental to the health of those employed in it (p. 93, Tables VIII, VIII a).

(9) In addition, a study of the occupational death rates suggests that the excess of male mortality in the rural areas at the age groups under examination may be caused rather by the deaths of males employed in occupations other than that of agriculture. It may be that of those who remain at home the stronger find work in agriculture, the weaker drift to less healthy labor in local towns (p. 94, Table IX).

(10) The general state of the housing in the rural areas is bad, and constantly the houseroom is inadequate. On the other hand, the general environment is beneficial, and there must surely be an absence of some types of the infections to be met with under urban conditions (pp. 95–97, based partly upon reports of the medical officer of health to the Essex county council and Thresh's *Housing of the Agricultural Labourer*).

(11) The diet, in many cases, is low; and both at the present time and in the past indications of actual deficiency can be found (pp. 97–113, Tables XI, XII, XIII, XIV).

(12) This deficiency of diet will be most pronounced where a young family exists, and the parents at that time will often be in those age groups in which the high death rates can be observed (p. 105).

. . . . . .

(14) The life tables constructed for the Essex migrants and homekeepers indicate that the migrants are a select population (pp. 114–122, Tables XVIII, XIX, XX, XXI).

203. E. G. Ravenstein: The Laws of Migration *

In March, 1885, I had the honor of reading before this society a paper which I perhaps somewhat ambitiously headed "The Laws of Migration." To that title I still adhere, notwithstanding the objections that may be raised against it. Of course I am perfectly aware that our laws of population, and economic laws generally, have not the rigidity of physical laws, as they are continually being interfered with by human agency. Currents of migration which would flow naturally in a certain direction traced out for them in the main by geographical features may thus be diverted, or stopped altogether, by legislative enactments. Even London, notwithstanding its unique geographical position, and the advantages derived from its being the center of a vast empire, would not have grown to the size it has if an enactment of the reign of Queen Elizabeth in restraint of its growth had been enforced down to the present day. . . .

In dealing with my subject I shall adhere, as far as possible, to the lines of my former paper, so as to facilitate comparison.

I shall therefore, first of all, divide the population of each country, province, or parish into its constituent elements, as determined by place of birth. I thus call "parochial element" those inhabitants who resided at the time of the census in the parish in which they were born. I apply the terms "provincial element," "national element," or "foreign element" in the same sense. Unless otherwise stated these "elements" are determined by place of birth, and not by "nationality," or admission to the privileges of citizenship. All persons born within the limits of the German Empire therefore pass with me for German, whether their mother tongue be German, French, or Polish. On the other hand, the children of Germans born in France are counted by me as Frenchmen, or rather natives of France, whether enumerated in Germany or elsewhere, or whether they have "opted" for the French nationality, or secured that of their parents. Fortunately the number of such persons proportionately to the total population of a country is nowhere very considerable. . . .

Having determined the elements of population of each country, I shall endeavor to trace and point out the results of migration, firstly in general, and secondly with reference to selected localities. . . .

It is clear that the gains and losses from migration ascertained in this manner apply only to migratory movements which go on within the limits of a state or country. They take no account of the losses suffered

* From E. G. Ravenstein, "The Laws of Migration," *Journal of the Royal Statistical Society*, LII, 241–250, 252, 275, 276–278, 286–288 (June, 1889).

by emigration to foreign parts, losses which are more especially severe in the case of frontier provinces. These losses, however, can be expressed if we compare the natural growth of the population, or that increase which is due to an excess of births over deaths, with the actual growth as determined by the census. Where this natural growth is in excess of the actual growth we have before us the process of "dispersion"; where the reverse is the case we are dealing with a case of absorption.[1] As an illustration I select the Duchy of Anhalt, which had 232,592 inhabitants in 1880, and 248,166 in 1885, exhibiting thus an increase of 15,574 inhabitants, equivalent to 1.29 per cent annually. But as during the same period the births exceeded the deaths to the number of 16,738, the natural growth, had there been no emigration, would have amounted to 1.38 per cent annually. The loss therefore due to emigration and not compensated for by immigration amounted to 1.39 — 1.29 = 0.10 per cent. This loss would have been still more severe if in return for the 59,290 native Anhalters who left their country for other parts of Germany and for foreign countries, there had not been a compensatory inflow of 57,500 Germans and foreigners. And thus whilst Anhalt is clearly a "county of absorption," and a gainer to the extent of 1.3 per cent, as long as we confine ourselves to the migratory movements going on within the borders of the German Empire, it should be classed with counties of dispersion if we desire in addition to this to take account of the emigration to foreign parts. . . .

There is one other feature in my paper against which I feel bound to warn you, viz., the temptation of looking upon the figures which I give as being in the strict sense of the word comparable. My figures are simply relative, and proportional to the total populations to which they refer. It is obvious that the apparent rate of migration must increase proportionately to the smallness of the units of the population with which we deal. The larger or more populous the districts into which we divide a country, the less active will the process of migration appear to be, until by taking a whole country the effects of migration, if we confine our attention to what is going on among the natives residing within the boundaries of the country, absolutely neutralize each other, exhibiting neither loss nor gain. If foreign residents in the country be taken into account, the gain will amount to the numbers of these strangers, and to no more. . . .

I begin my survey of continental Europe with the German Empire, as statistics available for that purpose are exceptionally complete. . . .

[1] The method of computing loss and gain by migration, emigration, and immigration in combination has been largely used in census returns. See, for example, the various census reports for the German Empire, and also the Census of England and Wales, 1881, IV, 51.

Short-journey migrants abound in Germany as they do elsewhere. This is amply proved by many instances given in the German census returns. Thus, out of 120,784 Royal Saxons who migrated into other provinces, as many as 37,057 had gone no further than the five nearest districts of Prussian Saxony and Silesia. That the larger towns increase in consequence of this migration at a quicker rate than do the smaller towns and the rural parts is an undoubted fact, and they do so at an increasing pace. . . . This looks very much like a depopulation of the rural parts, which is not, however, peculiar to Germany alone, and cannot therefore without further examination be ascribed to the action of the land laws, as far as the United Kingdom is concerned.

Females predominate among those migrants who go only short distances, and even in entire provinces, as in Schleswig-Holstein and Oldenburg, whence they are drawn to the neighboring Hanse towns, in which the demand for domestic servants is considerable. Among long-journey migrants they form a decided minority, for out of 1,000 women enumerated, only 88 were found outside their native province, whilst the proportion among men similarly situated was 106.

The number of persons of foreign birth is not so large as for instance in France, but it is sufficiently so to illustrate by its geographical distribution the migratory phenomena under review. If you examine the map prepared by me, you will find that this foreign element has invaded Germany from all sides, whether the boundary be formed by the sea or be drawn across the land; and that the inflowing currents are most powerful wherever geographical features facilitate or invite intercourse, and that they lose in strength the farther we trace them into the interior. There are of course a few exceptions to this rule, but the only ones of any importance are the capital of the empire (Berlin), and the districts of which Wiesbaden and Frankfort are the centers. . . .

Of course a large proportion of these foreign migrants may be classed as long-journey migrants, but the great bulk of them nevertheless shares the pecularity of all migrants, viz., that they go no further from their homes in search of work than is absolutely necessary. Hence the bulk of the persons of foreign birth is to be found in the provinces bordering upon the countries from which they come. . . . The bulk of the migrants who have swelled the population of Berlin have come from the neighboring provinces, and similarly the Berliners who have forsaken their native place for other parts of Germany have gone no further than the neighboring provinces, as many as 53 per cent of them being found in rural Brandenburg. Females form a majority of the migrants who have settled in Berlin, but this majority has been secured solely at the expense of the more accessible provinces. Females

too form a majority among the native Berliners who have gone to reside in other parts of Germany.

[The author then gives similar data for the Netherlands, Belgium, Luxembourg, Switzerland, Austria, Hungary, the Balkan peninsula, Bulgaria, Rumania, Denmark, Norway, Sweden, Finland, Russia, France, Italy, Spain, Portugal, and America. His conclusions for Europe follow.]

. . . The states of Europe form two groups, of which one has suffered a loss from combined European and extra-European migration, whilst the other has been a gainer. . . .

. . . In the following statement I have arranged the various states of western Europe into two groups, of which the first includes those states which have gained in population as a result of the migration going on within the limits of western Europe, whilst the second group is formed of states which have been the losers. Gains and losses are expressed *per mille* of the actual population at the time of the last census.

Switzerland owes its position at the head of this list no less to its character as a region of transit, lying between four great states, than to its small size, which intensifies all migratory symptoms. France and Belgium, however, are fair representatives of west European extremes, the one being a receptacle into which flows the surplus population from surrounding states, whilst Belgium, whose inhabitants are fairly obeying the Mosaic injunction, are pouring their thousands annually into France.

Hungary, Austria, and Germany would of course occupy different places in our list were we to embrace Russia and the Balkan States

First Group: States Which Have Gained from Migration

State	Gain		Principal Contributory Countries
	Number	Per Mille of Population	
Switzerland	61,900	21.7	Germany (51,100), Italy (22,000), Austria (6,100).
France	732,300	19.6	Belgium (350,900), Italy (207,800), Germany (49,300), Luxembourg (26,700).
Norway	23,400	13.9	Sweden (23,900).
Denmark	26,800	13.7	Sweden (19,500), Germany (12,400).
Portugal	13,700	2.9	Spain (12,100).
Hungary	18,700	1.2	Austria (14,700), Germany (2,000).
United Kingdom..	27,400	0.8	Germany (26,100), Man and Channel Islands (18,800), Netherlands (4,400).

SECOND GROUP: STATES WHICH HAVE SUFFERED LOSSES THROUGH MIGRATION

STATE	Loss		PRINCIPAL RECIPIENT COUNTRIES
	Number	Per Mille of Population	
Finland	700	0.3	
German Empire...	92,300	2.0	France (49,300), Switzerland (51,100), United Kingdom (26,100), Belgium (25,400).
Spain	41,000	2.4	France (49,300).
Austria	76,100	3.4	German Empire (62,100), Hungary (14,700), Switzerland (6,100).
Netherlands	32,400	8.1	Belgium (22,600).
Italy	247,000	8.7	France (207,800), Switzerland (22,000), Austria (13,400).
Sweden	58,100	12.7	Norway (23,900), Denmark (19,500), German Empire (7,800).
Man and Channel Isles	4,300	30.3	United Kingdom (18,800).
Belgium	308,200	83.1	France (350,900).
Luxembourg	29,600	139.0	France (26,700), Belgium (4,800).

within these "United States of Western Europe," for the number of western Europeans in the East is undoubtedly much larger than is that of "Easterlings" in the West. . . .

General conclusions.—Having thus placed before you a vast array of facts and figures, I venture to deduce from them certain principles or laws which appear to me to guide all migratory movements. I do not question for a moment that the principal, though not the only cause of migration, has to be sought for in overpopulation in one part of the country, whilst there exist elsewhere undeveloped resources which hold out greater promise for remunerative labor. It is obvious that this is not the only cause. Bad or oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsion (slave trade, transportation), all have produced and are still producing currents of migration, but none of these currents can compare in volume with that which arises from the desire inherent in most men to "better" themselves in material respects. It is thus that the surplus population of one part of the country drifts into another part, where the development of industry and commerce, or the possibility of procuring productive land still in a state of nature, calls for more hands to labor. But how is this call supplied? Suppose there exists a surplus of labor in one province and a deficiency in another, whilst

the intervening provinces are able to find remunerative occupation for all their inhabitants. Will the laborer, in search of work, travel across these intervening provinces, in order to supply the deficiency? I say no!

1. The want will be supplied from the immediate neighborhood, and its effect will travel from province to province until it makes itself felt in the most remote among them. Of course there arise exceptional wants as also exceptional opportunities, such as have been pointed out in the case of the United States, but under normal conditions the migratory movement will be a gradual one; it will proceed step by step, and will be transmitted from province to province. I may be permitted to liken this movement to that which is produced in a cistern of water after the tap has been turned on.

2. If this really is so, then the bulk of the migrants ought to travel short distances only, and that they really do this even in America, where the conditions are quite exceptional, I believe to have amply proved. No better proof of it could be found than in the invasion of a country by foreigners, among whom long-journey migrants must obviously be more numerous than among other classes of migrants. If you will carefully examine my tables and the illustrative maps, you will find that foreign emigrants are for the most part content with going no further than the nearest foreign province or the most convenient center of absorption. If a map were to be drawn exhibiting the stream of migrants passing from one country into another, it would clearly show that the current lost in strength in proportion to its distance from the source of supply. Of course there may occur eddies and shallows in such a current, and localities where it hurries along or slackens its speed to deposit a larger number of the human beings who are carried along by it; but its broad features are such as I have described. The phenomenon would be still clearer to the beholder if there did not exist in most countries scattered centers of absorption, which give rise to currents of their own, and divert others, until it becomes difficult to trace them.

3. I also believe that I have proved that each main current produces a countercurrent of feebler strength. As I have dealt at length with this branch of my inquiry in my former paper, I need say no more about it on the present occasion.

4. The question of whether our large towns grow at the expense of the rural parts of the country, even to the extent of producing a "depopulation" of the rural parts, has recently been dealt with before this society in an able manner. My inquiries justify me in asserting that in all settled countries the towns do increase in this way. If left to their own resources, if dependent upon natural increment only, they would increase very slowly, and in some instances they would even retro-

grade. Nothing can prove this more clearly than the proportion which the native town element bears to the total population in our large towns. . . .

We shall be pretty safe in assuming that one-half of the inhabitants of our large towns are not natives of the town in which they dwell. If the rest of the inhabitants had been supplied in equal proportions by all the provinces of a state, then our capitals might be fairly described as presenting an epitome of a whole nation. But although long-journey migrants move by preference into our large cities, still the larger share of the increment is due to an inflow of the surrounding rural population, and this accounts for the fact that even the largest cities of Europe partake of provincial characteristics.

The local streams which carry the rural populations into our towns are sometimes quite independent of the larger streams of migration, but generally they become merged in them. . . .

5. Females appear to predominate among short-journey migrants. I have drawn attention to exceptions to this rule, but numerically they are insignificant. On the other hand long-journey migrants appear to predominate among females born in large towns, including London, all the great Scotch towns, Paris, Vienna, and many others. Some of these ladies are no doubt carried abroad by countercurrents with a view to their adorning rural homes, but many, I am sure, are sought for their accomplishments in certain branches of industry.

6. Does migration increase? I believe so! . . . Migration means life and progress; a sedentary population, stagnation.

204. E. G. Ravenstein: Classification of Migrants *

Our personal experience, however limited, enables us to say that the distances which migrants travel before their place of residence is recorded in one of our periodical census returns vary very widely. Some of these migrants hail no farther than from the next parish; others are natives of a neighboring county; others again have come from a more remote part of the kingdom, or even from beyond sea. And when we inquire into the motives which have led these migrants to leave their homes, they will be found to be various too. In most instances it will be found that they did so in search of work of a more remunerative or attractive kind than that afforded by the places of their birth. It may be worth while to attempt a classification of migrants.

The local migrant confines himself to moving from one part of the town or parish in which he was born to another part of the same town or parish. The only place in the United Kingdom in which we can trace this local migration on the sure foundation of the census re-

* From Ravenstein, *ibid.*, XLVIII, Part II, pp. 181–184 (June, 1885).

turns is London. Out of every 100 of the 2,401,955 native residents enumerated in London, 59.7 were natives of Middlesex, 23.8 of Surrey, and 6.5 of Kent; but as out of every 100 only 66.2 were enumerated as residing in Middlesex, whilst 27.1 were enumerated in Surrey and 6.7 in Kent, a considerable migration from Middlesex into Surrey and Kent must have been going on within the limits of the metropolis. As a matter of fact only 86.7 out of every 100 natives of London thus enumerated were living on the day of the census in the county in which they were born. That a like displacement of the population is in progress in other towns of the United Kingdom cannot be doubted. That this is the case with respect to Manchester is evidenced by a decrease of the population of that town, which is more than balanced by an increase in its twin city, Salford. Similarly Glasgow grows but slowly in population, whilst its suburbs increase at a rapid rate. An interesting and suggestive paper by Dr. Longstaff, which deals with this branch of our inquiry, will be found in the *Charity Organisation Reporter* for 1883 and 1884.

Short-journey migrants.—If our census returns enabled us to analyze the inhabitants of each parish or registrar's district according to birth-places, we should find that the bulk of migrants had journeyed but a very little distance. Even with counties as large as Yorkshire, and with no information on the migration which goes on across the Scotch border, we find that of every 100 migrants enumerated in England and Wales, as many as 53.7 had gone no further than a border county. In Scotland 60.8 per cent of all migrants were enumerated in border counties; in Ireland, 40.2 per cent. The low proportion for Ireland is ascribable to the migration from Ireland to Great Britain, and would at once be reversed if we treated Lanark and Lancashire as border counties of Ireland.

The [percentage] distribution of the migrants for the whole of the United Kingdom is exhibited in the following tabular statement:

	Border Counties	Elsewhere in Same Kingdom	Sister Kingdoms
Migrants of Anglo-Welsh birth	52.4	45.1	2.5
Migrants of Scotch birth	46.0	29.8	24.2
Migrants of Irish birth	16.2	24.1	59.7
Migrants of British birth	46.2	39.9	13.9

. . . . . .

Migration by stages.—It often happens that a migrant in search of work wanders from parish to parish, settling down at each place for a

time, until on the day when the census is taken he finds himself far away from the place from which he originally started. There can be doubt, for instance, that many if not most of the natives of Ireland to be found in London did not travel from their homes in Ireland direct to their present place of residence, but reached it by stages. Some of them landed at Liverpool, and gradually worked their way through Cheshire, Stafford, Warwick, Northampton, and Buckingham, whilst another stream, and perhaps the more voluminous one, passed through Plymouth, Hampshire, and Surrey.

Long-journey migrants who leave their homes in order to settle in a distant part of the country are the exception, not the rule, and do not probably constitute 25 per cent of all migrants. Their movements are dependent upon special circumstances, some of which we shall consider in the sequel. *Temporary migrants* are an important class, whose existence is vouched for by the size of our hotels, barracks, prisons, and colleges, as well as by the number of sailors, many of whom must have been enumerated at ports lying outside the counties in which they were born. These temporary migrants constitute the floating element of the population, which is swamped in large towns of complex composition, but makes its presence felt very decisively at our naval and military stations, at health and pleasure resorts, in university towns, and in places abounding in boarding schools. It is a special feature of these temporary dwellers among strangers that many of them are migrants by compulsion and not by choice. The hop-pickers, who annually leave London for Kent and Surrey, and the agricultural laborers from the west of Ireland, who assist in getting in the harvest in the north of England, belong to this class.

205. E. G. Ravenstein: Countercurrents of Migration*

We have already had occasion to refer to the fact that side by side with each main stream or current of migrants there runs a counter-current which more or less compensates for the losses sustained by emigration. This countercurrent is strong in some cases, weak in others, and literally compensatory in a few instances. Its universal existence is proved by the fact that there is no county in England in which the native county element exceeds 90 per cent and none in the United Kingdom in which it exceeds 97 per cent.

This countercurrent is not by any means composed of migrants who return homeward disappointed in their hopes or in the possession of a competency, for ex-migrants of this class are included in the native-county element, and no data for even approximately determining their number are in our possession. It includes, no doubt, many chil-

* From Ravenstein, *op. cit.*, pp. 187–188.

dren of migrants, who have gone to the counties in which their parents were born, but the bulk of these migrants undoubtedly consists of persons whom business interests take away from their homes. But although we readily understand why the manufacturers of Yorkshire and Lancashire send persons to London to look after their interests, whilst the merchants of London dispatch agents and buyers to the manufacturing districts, the grounds which lead to an "exchange" of natives between counties so far removed from each other as are, for instance, Dorsetshire and Westmoreland, are not quite so easily understood. Yet fifty-five Dorsetshiremen were enumerated in Westmoreland, and twenty-six natives of Westmoreland in Dorset. Even the miniature county of Rutland has its representatives in every county of England and Wales, with the sole exception of Carnarvon and Radnor, and natives of all these counties were likewise enumerated in Rutland.

In the case of London, both the main and the countercurrents flow with considerable vigor. In 1881, 584,700 natives of London were enumerated in other parts of England and Wales, whilst the migrants from the country who resided in London numbered 1,164,071. The main currents of migration flow in every instance, with one single exception, Londonward, the exception being extra-metropolitan Surrey. . . . For every hundred strangers who settle in London, fifty natives of London leave the metropolis, and . . . over one-half of these migrants are carried no further by the countercurrents than one of the five metropolitan counties. Many, if not most of them, have merely removed to what are actually suburbs, and can hardly be said to have left the metropolis. Relatively strong are the countercurrents which set towards the manufacturing districts, and more especially towards Lancashire and Yorkshire. This proves once more that the movements of migrants are governed in most instances by business considerations.

For our second illustration I propose to go to Scotland, to the county of Peebles, where both emigration and immigration, outflow and inflow, are far above the average. In 1881, 14,272 natives of Peebles were enumerated in Scotland, of whom only 6,709 resided in the county of their birth, and 7,563 in other parts of Scotland. But as Peebles had a population of 13,688, no fewer than 6,979 persons enumerated within its borders were found to be natives of Scotland. Peebles is therefore classed by us as a "county of dispersion," and, like Perthshire, it is at the same time a "county of passage"; for whilst the migrants who cross its borders for Edinburgh, Linlithgow, Selkirk, Kirkcudbright, Renfew, and Dumbarton, outnumber the immigrants from these counties, the immigration from the rest of Scotland is in excess of the emigration. . . .

206. Charles J. Galpin: Rural-Urban Migration *

I. MIGRATION FROM THE FARM TO THE CITY

This study includes first 2,745 former farm operators who in recent years left farming for city, town, or village residence and occupation, and are found scattered in every state in the Union. . . . They went in about equal numbers to cities of 5,000 inhabitants and over, to towns of 1,000 to 5,000 inhabitants, and to villages of 1,000 and less. There is no claim that this particular sampling of farmers who left farming for city, town, or village is representative of all those farmers who left farming during the same period of years. . . .

In the selection of these 2,745 migrants there was no discrimination in favor of farm owners or against tenants. The only requirement was that the persons should have been farmers operating a farm. Hired men were not included. At the time of leaving the farm 16 per cent were tenants and 84 per cent were owners. . . . Not all these farmers who owned a farm at the time of leaving disposed of their farming interests; for out of 2,307 farm owners who migrated to city, town, or village, 1,681 still own farms. A few tenants, that is, 5.9 per cent of all tenants among these migrants, now own farms.

The interest in migration from farms turns, to a considerable extent, upon the number of children of migrants who leave the farm with their parents. In the present inquiry, the migrant farmers had 9,138 children, of whom 4,298 were still living with the family in the home in city, town, or village.

Ninety per cent of the 2,733 farmers who reported the year of their going to city, town, or village, migrated during the five-year period 1922–1926. . . .

Although the number of migrants operating farms for different 5-year periods, (that is, periods from 5 to 9 years up to 30 to 39 years) did not vary materially, it still is true that the number that operated farms from 30 to 39 years exceeded the number for any other period. The next largest number operated farms for the period 5 to 9 years, closely followed by those who operated for the period 10 to 14 years. Some tenant-operators had tried their hands as owner-operators, namely, 26 for a period of 0 to 4 years; 29 for a period of 5 to 9 years; and 25 for a period of 10 to 14 years. Most of these tenants do not own farms now. . . . More than one-half of the migrants never operated farms as tenants; that is, 1,439 operators had not, out of 2,540 who gave information on this point. It is noteworthy that 7.2 per cent of the migrants who were owners at the time of leaving the farm

* Adapted from Charles J. Galpin, *Analysis of Population to and from Farms* (mimeograph of the United States Department of Agriculture), October, 1927, pp. 1–12.

had previously operated farms as tenants for a period of 10 to 14 years; that 11.1 per cent of such owners had operated farms for 5 to 9 years as tenants; and 11.6 per cent had operated farms for a period of 0 to 4 years as tenants.

More than one-half of the migrants who were tenants at the time of leaving the farm had never been hired men. Of 1,877 who were owner-operators at the time of leaving the farm, 1,225 had never been hired men. . . .

Nearly one-half of the total number of migrants had never spent any time at occupations other than farming; but, as bearing upon the matter of leaving the farm for city, town, or village occupations it will be noticed that a considerable number of these migrants had already spent some years in other occupations; for example, 287 had spent from 2 to 3 years in other occupations; 218 had spent from 4 to 5 years; 130 had spent from 10 to 11 years; and 259 had spent 16 or more years in other occupations. . . .

Of the owner class, 18 per cent had spent from 5 to 9 years on the farm from which they moved. The next largest percentage (14.3 per cent) had spent from 10 to 14 years on such farms; 11.5 per cent had spent from 15 to 19 years on such farms; and 11.3 per cent had spent from 20 to 24 years. Of those who were tenants at the time of leaving the farms, 37 per cent had been tenants on the same farms for a period of not longer than 4 years; 23.2 per cent for a period of from 5 to 9 years; and 12.6 per cent had been on the same farm from 10 to 14 years.

The question naturally arises whether persons leaving the farms for city, town, or village occupations had been operating small farms or large. This investigation shows that 33.7 per cent of the owner-operators had been operating farms containing 100 to 174 acres; 15.1 per cent had been operating farms from 175 to 259 acres; 15.3 per cent farms containing from 260 to 499 acres; and 1.2 per cent had been operating farms of 1,000 acres or more. The same general trend holds with the migrants who were operating farms as tenants. . . .

Of the total, 1,635 gave some information about the percentage of income obtained at present from the farm; 258 migrants were receiving no income from the farm; 363 (that is, 22.2 per cent of those giving information) were receiving 70 per cent and more of their income from the farm; 152 (that is, 9.3 per cent) were receiving from 50 to 59 per cent of their present income from the farm; and 127 (that is, 7.8 per cent) were receiving from 20 to 29 per cent of their present income from the farm. . . .

Out of 1,571 migrants who report on the relationship between present operators of farms and the migrants who own these farms, it is

interesting that the present operators of 947 farms are no blood relation to the owners; that, however, the present operators of 360 farms are sons; 80 are sons-in-law; 37 are brothers; 31 brothers-in-law; 55 are nephews or cousins.

The number of migrants who were owners at the time of leaving the farm and who reported on the matter of age were 1,959; of tenants, 359. The number of owners whose ages range from 35 to 39 years is virtually the same as the number aged 40 to 44 years; 45 to 49 years; 50 to 54 years; 55 to 59 years; 60 to 64 years; although there is a small increase in the age group of 50 to 54 years. In the tenant class, 22.5 per cent are 29 years of age or less; 21.2 per cent are 30 to 34 years of age; and the number in the succeeding 5-year age groups are distributed about equally, being about 10 per cent in each case. . . .

Out of 1,424 owners of farms about 500 had had some high school study; 647 had attended school through the eighth grade. Among 278 tenants, over 100 had had some high school study, and 118 had finished the eighth grade of the elementary school. Of 1,320 wives of migrants who were owners at the time of leaving the farm, 581 had received an eighth grade elementary school training and about 500 had had some high school study. Of 259 wives of migrants who were tenants at the time of leaving the farm, 100 had an eighth grade elementary school education and 100 had been at least part through a high school.

The number of migrants, whether owners or tenants, who reported on the matter of present occupation was 1,326, of whom 1,113 were owners and 213 were tenants. It will be noted that 297 owners reported no present occupation. Evidently they have retired. Twelve tenants report on present occupation. The largest single occupation is that of laborers, trades, etc., namely, 25.3 per cent for both owners and tenants.

Out of a total number of 8,167 children of migrants who reported on number of children now living at home, 4,298 are now living with the family. In the case of families owning farms at the time of leaving the farm, about 50 per cent of the children are living at home now. In the case of families that were tenants at the time of leaving the farm about 73 per cent of the children are now living at home.

Some of the farmers who left the farm for city, town, or village gave more than one reason. This will account for 3,209 reasons for leaving the farm from 2,745 migrants. As a general rule, each farmer gave one influential reason for leaving. The predominant reason for leaving the farm was evidently of an economic character; 37.8 per cent of all reasons were of this character: "high prices," "high taxes," "not being able to make ends meet." The next most prevalent set of reasons was that of "physically disability," "old age," and "inability to obtain

enough help to carry on the farm and the household"; 25.2 per cent of all the reasons were of this nature. One of the most significant reasons pertaining both to the owners and to the tenants was the "small opportunity on the farm for schooling children"; 12 per cent of the reasons of owners and 5.6 per cent of the reasons of the tenants were of this character. A small percentage, 1.8 per cent, gave as reason to "let a son or son-in-law come on the farm." Perhaps the most significant reason is that the family has obtained a competency and is "economically able" to go to the city, "lead an easier life" and obtain those things which "the family has long craved but has not had the opportunity to obtain." Of all the reasons for leaving the farm 2.5 per cent were of this character; 76 cases of owners and 3 cases of tenants belong to this class.

This study enables one to gain some understanding of two aspects in the cityward movement of farm families; first, the characteristics of the families; second, the inducements for leaving the farms. Some of the characteristics of these 2,745 migrants are enumerated in conclusion.

More than half the migrants still hold title to farms.

The migrants had on an average between one and two of their children with them in the city, town, or village home. The average number of children in each family was a little over three.

These farmers were evidently farmers of long standing on the whole.

These farmers were about equally divided among those who had never done anything but farm and those who had tried other occupations.

Most of these farmers had been cultivators of moderately large farms.

One-third of those who still owned farms after moving received over half their present income from farms.

About one-third of the farms of those who still own their farms are operated by tenants who are related.

Two-thirds of these farmers had either finished the eighth grade of the elementary school or had had some high school education.

The schooling of the children of these farmers had gone further than that of the farmers, for three-quarters of the children had either finished the eighth grade or had been in high school.

Reasons for these migrations included drawbacks on the farm and inducements in village, town, or city.

Not being able to make ends meet while on the farm was the chief reason that a full third of these migrants gave for leaving.

Physical disability led to a going of one-quarter of the farmers.

To gain a better schooling for their children ranked high as an inducement with both owners and tenants.

Financial ability to live in the city counted with one farmer out of every forty.

II. MIGRATION FROM THE CITY TO FARMS

The next study is of persons who moved from cities, towns, or villages to live and work on farms. . . . Names and addresses of 10,000 persons who had recently moved from cities, towns, or villages to farms were obtained through the courtesy of 120,000 farmers. These 10,000 persons were asked for some details regarding their change of occupations, and 1,167 of them replied. The sample is small, but it represents at random every state but three, Arizona, Delaware, and New Mexico. It is a commonplace fact that a stream of persons from city industries is constantly moving to farms, but it has not been known with any certainty what the general character of this migration is. The present inquiry is intended to throw some light upon this farmward movement.

Pennsylvania with 90, New York with 86, Missouri with 80, and Michigan with 70 lead in the number of migrants entering into this study. The total number included who became farm owners is 776, tenants 344, hired men 47.

More than half the total number of migrants left the city, town, or village in the years 1925 and 1926, (63.8 per cent). . . .

Perhaps the most significant outcome of this investigation lies in the percentage of all migrants to the farm from city, town, or village who had previously been brought up on farms or who had previously had farm experience of some kind. Out of 1,166 persons who answered this question, only 155, (13.3 per cent) had never previously had farm experience.

The total number of these migrants who moved farmward from city, town, or village who had had previous experience in farming was 1,001. Of these, 389 had been owners of farms; 330 had been tenants; 153 had been hired men and 129 had helped on the home farm as boys or young men. It will be noticed that 333 of the migrants who became owners after leaving the city, town, or village had been owners of farms previously and that 132 of such migrants had been tenants previously.

Out of 1,132 migrants now on the farm, 289, or 25.5 per cent, have no children now on the farm; 225, or 19.9 per cent, have only one child now on the farm; 220, or 19.4 per cent, have two children; 146, or 12.9 per cent, have three children. Of 337 tenants, 54 have no children on the farm; 61 have one child; 68 have two children; 59 have

three children. Out of 46 hired men, 11 have no children on the farm now; 7 have one; 9 have two; 7 have three children.

Of 1,161 migrants to farms, 15.9 per cent are from 30 to 34 years of age; 15.2 per cent are from 35 to 39 years of age; 14.1 per cent are from 40 to 44 years of age; and 11.4 per cent are from 45 to 49 years of age. Of those who are now owners of farms, the greatest number fall in the age group of 40 to 44; the next largest number fall in the age group 45 to 49 years of age. Of 343 tenants on farms now 84 fall in the group 30 to 34 years of age; 62 in the group 35 to 39 years of age; and 59 in the group 25 to 29 years of age.

The majority of the migrants, whether owners, tenants, or hired men, say that they like farm work better than city work and that they consider farming a good occupation. Out of a total of 1,094 migrants 82.6 per cent are favorable to farm work. These migrants are distributed among tenure groups as follows: Of those owning farms, 80.5 per cent are favorable to farm work; of those who are tenants now, 86.7 per cent are favorable; of those who are hired men, 85.1 per cent are favorable. Some of the migrants considered the farm and city work as about equally desirable with the exception that farm work was harder; but these usually added that it was more healthful. About two per cent of all the migrants would like farm work better if it were more profitable, according to their statements.

Out of a total of 1,098 migrants, 54.3 per cent can report that they make a better living on the farm than they did in the city. Of the owners of farms now, 47.4 per cent report a better living on the farms. Of tenants, 66.9 per cent report a better living on the farms, and of the hired men, 73.3 per cent report a better living. A certain small percentage, namely, 6.3 per cent of all the migrants, think living on farms and in cities is about the same; 4.3 per cent of the migrants had not been on the farm long enough to determine; 2.1 per cent reported that the farm was not on a good paying basis yet, but they expected to make it pay; 3.2 per cent of the migrants do not depend upon the farm for a living.

The question why persons leave industry for farming is perhaps too subtle for exact analysis by the method used but we do get what lies on the surface of the migrant's mind in this way; and to know what the migrant thinks about this change of occupations is one step towards getting at the underlying causes.

The number of reasons given is somewhat more than the number of migrants. Apparently a considerable number of the 1,167 persons felt influenced by more than a single major reason.

The outstanding set of reasons for change of occupations among

those who became farm owners and tenants was that including "health," "better living conditions," "better place to bring up children," "love of nature and country life." The dominant set of reasons among those who became hired men included "cost of living too high in cities," "could do better on farm," "could make more money on farm," although this set of inducements was closely followed by that which had the first place with farm owners and tenants. "Got tired of city life" figures frequently in the replies from these migrants. "Wanting to live an independent life" was strong enough to be 6.6 per cent of all the reasons for all three classes of persons.

There has always been much guesswork as to the type of persons who change from city life and work to farming, and as to the inducements which prevail. This small preliminary study will furnish some clues, at least, to this problem. Let us briefly summarize the main characteristics of these migrants to farms:

The outstanding fact about these persons is that 86.7 per cent had previously had farm experience.

One-third and more of those who had previous farm experience had owned farms before and one-third had tried their hand at being tenants.

These migrants had an average of 2.1 children to the family, classified as follows: 1.9 to families of owners; 2.5 to tenants; 2.4 to hired men.

These were men in the early prime of life.

About two-thirds of these migrants found that they could make a better living on the farm than in the city.

Let us summarize now the inducements which brought about the change from city, town, or village occupation to farming:

Belief that better health would be found for parents and children induced many to give up life and work in city, town, or village; high cost of living in cities weighed with those who become hired men on farms; that they were tired of city life induced a considerable percentage of these people to seek the farm; the farm's offer of an independent life prevailed with others.

CHAPTER XXIII

FUNDAMENTAL FUNCTIONS OF THE CITY AND THE COUNTRY IN THE LIFE HISTORY OF NATIONS AND OF MANKIND

A. THE PRE-URBAN STAGE

In the preceding chapters we have presented an analysis of the rural-urban worlds and of the agricultural population; we are now prepared to summarize briefly the fundamental functions that the city and the country have performed in the life history of nations or of mankind as a whole.

In the period before the existence of cities the rural social world fulfilled all the functions necessary for the survival of man and the satisfaction of his vital needs. The achievements of the rural world at that stage were by no means insignificant. It supplied the vital needs of human beings, food, shelter, clothing, and safety, and maintained the biological balance of the population. It created refined forms of social organization: the cumulative community, the integrated family, and various economic, political, religious, moral, aesthetic, and educational organizations well adapted to existing familistic conditions. We should consider ourselves fortunate if our contemporary social organization were as well suited to urban conditions today as was the pre-urban form to the needs of the population at that stage. Of greatest importance are the psycho-social values created by the rural world of that early period. It laid the foundation of agricultural religion and philosophy and of the agricultural *Weltanschauung,* established enduring principles of morality, and made important contributions in the fields of art, recreation, education, social control, and the methods of socialization—a heritage that forms the basis of our modern culture. We still live by it and cannot dispense with it. Had the phenomenon of urbanization never appeared in the world, mankind would have had almost as good reason as it has today to regard itself as different from all other species.

B. RURAL FUNCTIONS AFTER THE DEVELOPMENT OF URBANIZATION

As the rural and urban environments became differentiated, in an increasing degree certain specific functions were relegated to each society.

1. Rural populations and agricultural countries have specialized in the production of human material, producing more than was necessary to maintain their biological balance. Urban populations and urbanized countries have specialized in the utilization of this surplus to promote the growth of cities and to compensate for their own negative biological balance, for an excess of deaths over births in the cities has been fairly general in the past.

2. The rural world has been the principal source of health and vitality, which, infused into the urban population, have benefited it physically and made possible the development of cultural standards that have reacted in turn to the advantage of the rural world.

3. The rural world has specialized in the production of food and other raw materials, whereas the urban world has concentrated its energies on the development of industries, the transformation of food and raw materials into industrial products and into objects of material and nonmaterial culture, and the diffusion of these products among various rural and urban societies. The development of these specialized activities by the cities has helped the rural world in its task of producing food and other raw materials.

4. The rural world has tended to concentrate its efforts on the social organization of individual rural communities. The urban world has tended more and more to monopolize the functions involved in maintaining a state organization composed of many united communities. It has assumed responsibilities for the maintenance and expansion of the state, the creation of forms of social organization for all types of communities, and the regulation of their interrelationships, as well as of the relationships between various states and countries. This division of functions has led to the concentration of governmental functions, functions of social control, and activities pertaining to organization in the cities. The cities have become the central seats of the military and civil governments and the headquarters of religious, educational,

professional, industrial, and commercial agencies and institutions. These numerous agencies have taken over most of the power of organization and control, not only in urban affairs and in the matter of the relationships among various urban, rural, and national groups but even in the affairs of the rural community itself. They have prescribed social, political, and other forms of organization for the rural communities, and have imposed upon them their own schemes, plans, and regulations. In this way the rural world has been deprived more and more of its autonomy, until now its chief function consists in supplying the cities with human material (for the army and for other urban institutions); with money in the form of taxes and duties; and with raw materials that the urban world must have in order to continue its monopoly of social and governmental activities. If the rural world has suffered somewhat by this process, the disadvantage has been balanced, to a considerable extent at least, by the many advantages that have been derived from such centralization.

5. In other respects the principal rôle of the rural world has been one of conserving cultural values and establishing more firmly the *Gestalt* of a particular culture. The city has played a dynamic rôle, inventing, innovating, modifying, and occasionally disrupting the existing cultural values and preventing the continuance of a specific form of culture. In this way the country has facilitated social order and stability; the city has initiated social change and movement, sometimes in a positive, sometimes in a negative direction. We have seen that the rural population has played this conservative rôle in all cultural and social fields. In politics it has been less restless and radical, and it has been exposed less than has the urban population to the forces of incessant change. In the field of crime, also, the rural population has been more stable, less inclined to erratic conduct. We have shown that the same situation prevails in religious, aesthetic, educational, moral, economic, and other spheres.

We have shown in the second volume of this book that the country everywhere lags behind the city in adopting innovations. This truth may be stated as a general proposition. If we were to take imaginary cross sections of the culture of a nation—that is, of both its rural and its urban cultures—on two occasions separated, let us say, by thirty-five years, we should probably find that

the rural culture of the second period was characterized by many features that the urban culture had shown in the first period, while urban culture consisted in part of new cultural phenomena not as yet introduced into the rural districts. Later, provided they were destined to form a part of the culture of the nation as a whole, these new characteristics would spread over the rural section of the country. The dynamics of cultural phenomena provide for a constant cultural lag in the country as compared with the city. It is probable that the same law operates in the diffusion of cultural items originating in the country, and that these spread later to the city. Hence there is also a lag in urban as compared with rural culture. This stream flowing from the country to the city seems to be considerably weaker, however, than the opposite stream.

The conservative and innovative rôles of country and city, respectively, have been shown throughout the second volume of this work. The intensive and varied activity of the city tends constantly to change cultural values and to reshape the national physiognomy and the cultural individuality into something new, whether good or bad. The country tends to conserve and preserve existing forms. The soul of the city inheres in its modernity, its homage to the fashion and the newest sensation; the soul of the country is found in its respect for tradition and the customs of its forefathers. "Urban society, which has neither memory nor ancestors, is ever glad to hear some new thing; but rural society has a long memory, and is so fully aware of grandfatherly usages that it can hardly forbear to respect them. The countryman's natural impulse is to do, for his good or ill, as his grandfather did, because [direct] knowledge of his grandfather's ways fills a large part of his mind." [1]

Although there are exceptions, which are due primarily to the fact that an opposite stream of innovations flows from the country to the city (consisting usually, however, of former characteristics of the national culture to which the city returns), nevertheless the theories stated above seem as a general rule to be sound.

[1] Helen Douglas-Irvine, *The Making of Rural Europe,* London, 1923, p. 169. These and other social functions of the city and country have been emphasized by many Greek, Roman, medieval, and modern thinkers. For their statements see chapters i and ii of this work.

6. The rôle of the rural population and particularly of the agricultural class as a preserver of national culture is associated with its patriotism and its nationalistic point of view. The cities have always been comparatively cosmopolitan; their culture has contained a greater proportion of foreign elements than has the culture of the rural districts. Consequently the city has been a factor in developing an international, cosmopolitan spirit, whereas the country has preserved a cultural isolation. Both city and country, of course, have performed both these functions to some extent, but the city has been the stronger force in making culture cosmopolitan, the country the stronger in keeping it within the bounds of nationality.

We believe that this difference is explainable on the basis of the essential differences between city and country: the greater heterogeneity and mobility of the city; the larger area with which the city has contact; the greater speed and facility in communicating with a large number of persons.

As the city population in a greater degree than the country population is a heterogeneous body whose members differ in religion, traditions, language, customs, and attitudes, and as the city is in closer contact with foreign countries, it is easy to understand why urban culture is more international than rural culture. Its heterogeneity also prevents the city from achieving a uniform development in all the cultural fields previously mentioned. The wide contacts that urbanites enjoy with a variety of persons, native and foreign, within and without the city, lead to the infusion of foreign traits into the national culture and thus to the development of internationalism. The realization grows that traits in foreign culture are often as good as native ones and sometimes even better. The greater mobility of the urbanites, both socially and territorially, fosters internationalism. Opposite conditions develop in the country an enthusiastic spirit of nationalism, not in the military sense but in the sense of belief in and love of native culture.

The same conditions explain why the rural classes have a more highly developed patriotism, if the word be used in the sense of a particular attachment to and love for one's own region or country. Their place of birth and lifelong home leaves an indelible

impression upon their personalities. City people, however, do not empty phrase and its use indicative of "a stupid nationalistic prejudice." Emotional patriotism tends more and more to be replaced share this attitude. They are likely to consider "My country!" an by *"Ubi bene ibi patria."*

A unique combination of cultural elements—language, religious beliefs, forms of art and literature, political, economic, and social institutions, folk ways, marriage and family customs—all compose a national culture complex. As long as this complex preserves its essential features in spite of changes in certain of its elements, the national culture continues to exist. It may survive even the loss of political independence. But when the unique combination loses its essential character, we say that the national culture complex has perished. The history of a society as a separate unit is finished when this happens, even though some elements in its national culture survive.

The farmer-peasant class has been a fundamental factor in the long-continued existence of any particular national culture complex. Other conditions being equal, the culture complexes of predominantly agricultural societies have lasted somewhat longer than those of predominantly urban societies. Neither loss of political independence nor subjugation by conquering peoples has destroyed the national culture complexes of agricultural societies as it has destroyed those of urban societies. Rural societies, in addition to being more capable of preserving the integrity of their national cultures, have been more successful in regaining their political independence after having lost it to foreign conquerors than have highly urbanized societies. The reasons may be seen from the preceding discussion and from a consideration of the fundamental characteristics of the city and the country. The agricultural classes are secluded and in consequence lack contacts with foreign culture; the radius of their contacts is limited and rarely extends beyond the rural area or, at most, the boundaries of the nation. They are less mobile and culturally more homogeneous. The processes of social change go on more slowly among them than among the urban population. Their culture is confined to that of their own country, and they are strongly nationalistic and patriotic.

All these facts explain the ability of the farmer-peasant class to preserve the national culture complex against the onslaughts of disruptive forces, whereas the urban population succumbs to them. Because of the density of its population, its cosmopolitan character, its mobility and heterogeneity, the city is likely to be influenced much more than the country by the invasion of a foreign culture, whether this be accomplished peaceably or by force. The country, because of its isolation and for other reasons already mentioned, is protected much more than the city against the forces of disintegration, even when it has been conquered politically.[2]

The preceding discussion makes it plain why, on the one hand, the highly urbanized Graeco-Roman culture decayed rapidly and never revived, and why, on the other, the cultures of such agricultural countries as India and China have persisted for thousands of years in spite of invasions, political subjugation, and other disasters. It explains also why such agricultural countries as Poland, Serbia, Bulgaria, and Finland have regained their political independence in spite of many centuries of subjugation to countries whose cultures were foreign to their own.[3]

The summary given above shows that the biological, psychological, and social functions of city and country in the life history of societies and of mankind have changed considerably since the city and country became differentiated. Neither has become self-sufficient; they are mutually dependent, and they supplement each other. The well-being of particular societies has demanded a well-balanced cooperation between city and country; the well-being of mankind had necessitated a well-balanced cooperation between highly industrialized and predominantly agricultural countries. In spite of the existence of a certain antipathy between the city and the country and between highly industrialized and predominantly agricultural societies, their reciprocal services have been far more vital and important, in all probability, than their

[2] For historical proof see Pitirim A. Sorokin and Carle C. Zimmerman, *Principles of Rural-Urban Sociology,* New York, 1929, pp. 413–417. See also George L. Gomme, *The Village Community,* London, 1890, p. 292; Arnold van Gennep, "Classe rurale, noblesse, et nationalité," *Revue de l'Institut de sociologie,* Vol. I, No. 2 (1921), a detailed analysis of the problem presenting similar conclusions, from which an excerpt is given in the readings for this chapter; and M. C. Bouglé, "Remarques sur le régime des castes," *L'année sociologique,* IV, 55 (1900).

[3] See Sorokin and Zimmerman, *op. cit.,* pp. 413–417.

antagonisms. Such at least has been the case up to the present time.

C. THE FUTURE OF THE RURAL AND URBAN WORLDS

At this point we may raise some questions about the future of rural and urban societies. Will the present division of labor continue? Will rural-urban differences increase in the future? What are the future prospects of each society? What is going to happen to the agricultural population and to mankind as a whole? It is needless to stress the fact that answers to these questions must be tentative. With this reservation always in mind, let us briefly discuss the chief possibilities for the future. These may be divided into three classes: First, the rural world may grow at the expense of the urban world. Secondly, the urban world may grow at the expense of the rural, until the latter—and the farmer-peasant class—disappear from the scene of history. Thirdly, both societies may continue in the future, irrespective of whether the existing division of functions and the existing differences between city and country increase, decrease, or remain constant. This third possibility seemingly contains within itself three subhypotheses. Let us turn now to a brief analysis of each of the main hypotheses.

1. *Hypothesis of the future growth of the rural world at the expense of the urban.*—The first hypothesis can scarcely be maintained, for it is contradicted by the facts of recent history, as well as by other convincing evidence. The last few centuries, as we have already shown, have been characterized by a very marked growth of the urban population—a growth far greater than that of the population as a whole. The number of European cities with populations above 100,000 was 23 in 1800, 146 in 1900, and 202 in 1920.[4] A similar development took place among cities on other continents. Moreover, the proportion of the agricultural population in the total employed population has been decreasing from year to year. The following figures sum up the situation in the last few decades. The percentage of the population engaged in agriculture decreased in the United States from 44.1 in 1880 to 32.5 in 1910 and 26.3 in 1920; in Belgium from 44.0 in 1846 to 16.01 in 1910; in England and Wales from 12.0 in 1881 to 6.5 in

[4] See the detailed figures in Henri Bunle, "Superficie et population des contrées de la terre vers 1920," *Bulletin de l'Institut international de statistique*, Vol. XXI, 1927. See also the *Annuaire statistique des grandes villes*, 1927.

1921; in Germany from 42.5 in 1882 to 28.6 in 1907; in Sweden from 51.6 in 1870 to 38.4 in 1920; in Switzerland from 31.2 in 1900 to 25.5 in 1920; in Finland from 74.8 in 1880 to 65.1 in 1920; in Canada from 34.28 in 1911 to 32.82 in 1921; in Australia from 44.0 in 1871 to 25.8 in 1921; in New Zealand from 29.0 in 1881 to 24.5 in 1911; in Austria from 62.6 in 1870 to 59.1 in 1900; in Hungary from 70.5 in 1890 to 69.1 in 1900; in Denmark from 46.2 in 1901 to 40.3 in 1911; and in Scotland from 16.2 in 1871 to 10.3 in 1901.

Thus the percentage of the population engaged in agriculture has been decreasing regularly in a great many countries. In others, such as Norway, the Netherlands, Italy, France, Cuba, Bulgaria, and British India, there has been no conspicuous decrease, but neither has there been a definite increase. These countries do not compensate for the decrease of the agricultural population in other countries. On the whole, the last few decades have been characterized by a decrease in the proportion of the world's population engaged in agricultural pursuits.[5]

A universal return to rural conditions would necessitate a great decrease in the population of many countries, the decay of machine civilization and mechanical industries, and the abandonment of present agricultural methods, based on the use of machinery, which enable a few persons to perform tasks that required the labor of many under the earlier agricultural system with its less efficient technique. It would mean also the decay of modern means of transportation and communication. In brief, it would mean the annihilation of the principal results of the industrial revolution and of the fundamental characteristics of machine civilization, and a return to production techniques of an earlier period. Such an abandonment of urban forms of civilization as a world movement is extremely improbable. It may, of course, occur temporarily and in some degree in a particular country, as it did in the past in Greece and Rome, in India and in Arabia, and as

[5] The following are the sources of the data: Statistical Abstract of the United States, 1925, p. 47; *Annuaire statistique de la Belgique,* 1920, p. xxiv; Census of England and Wales, 1921, General Report, p. 143; *Statistisches Jahrbuch für das Deutsche Reich,* 1926, p. 14; *Statistisk Årsbok för Sverige,* 1926, p. 20; *Statistisches Jahrbuch der Schweiz,* 1926, p. 61; *Annuaire statistique de Finlande,* 1927, p. 48; the Canada Year Book, 1926, p. 674; Official Yearbook of the Commonwealth of Australia, 1926, p. 889; Eugene Merritt, "The Agricultural Element in the Population," *Journal of the American Statistical Association,* XV, 58 ff. (March, 1916). See also some of the yearbooks of other countries.

it did in the years from 1917 to 1922 in Soviet Russia. It may happen again, but it will be a temporary and local phenomenon, by no means typical of the general trend. The considerations we have presented enable us to reject as improbable the hypothesis that the rural world will grow at the expense of the urban.

2. *Hypothesis of complete urbanization in the future.*—Although cities may continue to grow at the expense of the country in the near future, the hypothesis of the complete urbanization of mankind and the disappearance of rural life and of the agricultural classes is untenable. For in the first place a completely urbanized society could not survive. Like any other society it would need food, and therefore it would have to have a class of people, whether large or small, delegated to produce it. But with the establishment of such a class the society would cease to be wholly urban. Industry under such a régime would be unable to obtain raw materials and so would cease. Moreover, without a rural hinterland the market for industrial products would not be large enough to enable the factories to operate successfully. Finally, it is highly doubtful whether such a society could maintain its biological balance. If it were not recruited by migrants from agricultural countries, and if it suffered from the low birth rate associated with urbanization, it is likely that the population would either remain stationary or, more probably, decrease. Such a society would certainly be engulfed by degrees by more prolific societies.

These self-evident facts show that a wholly urban society is an impossibility. Furthermore, it is extremely doubtful whether a very highly—though not completely—urbanized society with a very small rural hinterland, either in its own or in a foreign country, could endure very long. If its rural hinterland were too small (not in the territorial sense, necessarily, but too small to furnish the urban society with its necessary food products and to consume the industrial products), and if the rural area had become considerably urbanized, the stability of the society would be jeopardized. The insufficiency of agricultural products, both food and raw materials, would be a permanent menace. Any crisis would convert this menace from a potential to an active one; disturbances would occur, especially if the population were actually suffering, and undermine the stability of a society already precari-

ously balanced. Insufficiency of raw materials, impeding the operation and development of industries, would result in an increase of unemployment. Unemployment would result also from the inability of a small rural population to consume large quantities of industrial products. A condition of overproduction, presumably, would follow, and in turn would lead to business depression and further increase in unemployment. Unemployment usually augments social disturbances—riots, disorders, and revolutions—and these, under such circumstances, would aggravate the situation still more.

Another difficulty in an almost wholly urban society would be that of obtaining a sufficient supply of human material. The small rural hinterland could not yield many migrants to the urbanized region, which would be likely to have a very low birth rate and to be incapable of increasing its population by means of propagation. The small rural hinterland, according to the supposition, is already considerably urbanized; hence it, too, would be likely to have a low birth rate. The urban society would be likely therefore to have either a static or, more probably, a decreasing population, and to die out eventually, by fast or slow degrees as circumstances determined. It would be doomed to gradual obliteration, to replacement by more fertile and better balanced societies, or to disorganization and chronic anarchy.[6] Ancient Rome and Greece during the later periods of their history and contemporary Austria are actual examples that approach fairly closely the hypothetical case discussed. These considerations are sufficient to show why urbanization cannot be complete and why it cannot proceed too far without endangering the well-being and continued existence of the societies in which it prevails. Complete urbanization is impossible and nearly complete urbanization is very improbable.

3. *Hypothesis of the continued coexistence of the rural and urban worlds.*—This hypothesis is more likely to be fulfilled than either of the preceding ones. Both the rural and the urban worlds will perhaps continue to exist to some degree and in some form. But how and in what form? Will rural-urban differences be accentuated more and more and the differentiation between the two societies be increased? Will they remain as they are now?

[6] For a similar but more detailed analysis of the situation see Corrado Gini, *I fattori demografici dell' evoluzione delle nazioni,* Turin, 1912.

Or will the differences decrease? The third possibility appears to be the most probable. The differences between urban and rural societies will probably decrease in the future, for both seem to be approaching a middle type that we may call "rurban."

We will present briefly the main reasons for our conclusion. We have seen that one of the chief differences between the city and the country has been in means and extent of communication and contact (see chapter iv). Railroads, automobiles, telephones, telegraphs, radios, movies, and newspapers, however, which are now very widely diffused, have decreased the mutual isolation of city and country in a very high degree. Formerly a village or farm was isolated from the rest of the world; now it is included in the world network created by modern systems of communication. The rural class, therefore, has begun to have the same contacts and sources of information as the urban population.

This "social telephone system" between the city and the country bridges the gulf between these worlds and tends to obliterate differences between their cultures. The urban cultural patterns spread more and more over the rural world, while the rural cultural patterns make their way into the urban world. Thus the candle of rural-urban differences is being burned at both ends. In Part III of this work it was shown that such has been the tendency in all fields of rural-urban culture; the cities and the country have constantly approached a mean cultural type.

The second important difference between the rural and urban worlds has been the greater mobility of the urban as compared with the rural population. The invention of modern means of communication and transportation has tended to decrease this difference by increasing the mobility of the rural population, stimulating greatly the migration from country to city, and vice versa. Immobility, especially the territorial immobility of the rural population, belongs to the past. Cultivators, formerly immobile, have found themselves plunged into the stream, and like the urbanites they have moved from place to place and from position to position, swept on by strong horizontal and vertical currents. This result has in its turn tended to decrease further the mutual isolation of country and city. The two societies have tended to merge as differences in mobility have decreased.

The effects of the modern technical revolution have been simi-

lar. At first machinery and mechanical devices were used only in urban industries, a fact that increased greatly the differences in occupation between city and the country. The situation, however, has changed greatly. Agricultural work has been mechanized increasingly by the introduction of electricity, gas, oil, tractors, combines, steam engines, and a great many other types of agricultural machinery. The nonmechanical character of agriculture as contrasted with the mechanized industries has become less and less marked. Hence even the occupational differences between the two societies have decreased.

This difference will doubtless be decreased still further by the increased use of electric power, which is beginning to play a revolutionary rôle. The first stage of the industrial revolution was the use of steam power. This power could not be transmitted over great distances, however; consequently all industries using machinery were concentrated in the cities, where great factories were built. The countryside was comparatively free from this invasion; its principal occupation continued to be agriculture, while the urban world became predominantly industrial. Thus from the occupational standpoint the invention of steam power widened the gap between city and country. The replacement of steam power by electricity and the development of the natural gas industry, however, tend to produce a very different condition, for electricity and natural gas can be transmitted easily and cheaply over vast distances, and consequently factories and other industrial establishments can be spread out over a large territory in places convenient for particular industries. As a result, in America as well as in several other countries we are witnessing the removal in increasing numbers of factories and industrial establishments from cities to rural districts. (See the paper entitled "America's New Frontier" in the readings.)

Agricultural purity is thus becoming increasingly contaminated by encroaching industrialism. The country as an occupational milieu is becoming more like the city. In addition there is a growing agricultural industry in and around the city. Vegetables, fruit, dairy products, and poultry are being produced near the city, and farmers are settling in the city itself. Sometimes they are induced to come by the fact that their farms are near by and the change is a small one in point of distance; sometimes they may intend to

retire; sometimes they are attracted by better health conditions or better educational facilities. In this way, once more, differences are being reduced.

Differences in the total sizes of the rural and urban populations and in their densities are also fundamental. Although we cannot say with certainty that these differences, too, tend to decrease, we can at least assert that they cannot increase much and that probably they will become less conspicuous in the future. The unprecedented development of cities today, both in size and in density of population, is due largely to steam power. Among other factors the existence in the cities of large industrial establishments employing tens of thousands of persons has forced the commercial, clerical, and professional classes to stay in the cities. The result has been the growth of large cities, some having populations of several millions, concentrated in a comparatively small area. The size of the cities and the density of their population have become so great that the cities have already begun to be biologically unhealthful, psychologically uncomfortable, economically expensive and wasteful, and morally and socially dangerous. The readings give certain data showing that the same conveniences cost considerably more, quantitatively and qualitatively, in large cities today than in middle-sized or small ones.

As large cities grow larger there is a progressive and disproportionate rise of the expenses necessary to maintain them. This condition must have an adverse effect on their further growth, retarding or even stopping it. If it were not for electric power and natural gas, the present system would perhaps have to take its course. But electricity and natural gas make it possible for many institutions and industrial establishments to function successfully elsewhere than in large cities and for many people to live more comfortably outside large cities without foregoing the advantages of the city. As the process continues whereby industrial establishments move from the cities, an increasing percentage of the population previously engaged in the large cities will naturally be employed in these extra-urban industries.

In these and other ways the growth of the large cities in total population and in density is likely to be retarded, while that of the small towns and villages develops. Thus in another respect the contrast between city and country seems to be decreasing.

Our general conclusion must be that all the principal differences between rural and urban societies—differences in means of communication, in mobility, occupation, total population, and density—are tending to diminish. Rural and urban societies, as we have already indicated, are approaching a type of rurban society in which they will draw closer together and will resemble each other more than they have in the recent past. If this tentative conclusion is correct, the climax of rural-urban differentiation has been reached and passed. Society was not, of course, divided into city and country at the beginning of human history, and when this differentiation first appeared it was slight. But the cleavage gradually widened, although there were fluctuations. Finally, under the influence of steam-power civilization, the two societies became radically different. The use of electricity, however, and such recent inventions as the radio and the automobile have begun to produce a *rapprochement* that in all probability will develop.

D. THE FUTURE OF THE AGRICULTURAL CLASS IN A RURBANIZED SOCIETY

This *rapprochement* has already manifested itself in the fact that the rural population has come to resemble the urban in many respects. Urban traits have increased in its culture, institutions, organization, and behavior. Although these tendencies have been discussed in preceding sections, the principal ones may be recalled briefly.

1. The rural population has tended to pass from the more cumulative community to a form in which different overlapping groups perform different functions. The latter form of social organization is predominantly urban.

2. The familistic basis on which rural society was organized in the past has lost ground rapidly as nonfamilistic elements similar to those in the city, elements based on contact with persons and institutions outside the family, increase in importance.

3. The familistic basis of the economic organization of the rural population has tended to be replaced by a nonfamilistic organization founded on business considerations and on the rational, though somewhat egotistic, economy that is typical of the cities.

4. In the same way the farmer-peasant family economy has gradually been replaced by an economy involving the use of

money. Since production for the market has tended to be substituted for production for family consumption alone, farming has been diversified and specialized according to the demands of the world market. Agriculture has been reorganized and mechanized to resemble an urban business enterprise. Money, a world market, efficient business methods, and the extensive use of machinery are but symbols of the "city soul." (See the papers by Simmel and Spengler in the first volume of this work.)

5. We have seen that recent trends in political, educational, religious, aesthetic, and moral aspects of rural institutions and cultural organizations have also been in the direction of urban patterns.

6. Rural family organization also has approached the type of the urban family, having both its desirable and its undesirable traits.

7. In many other traits of rural personality and behavior the same tendency may be seen. The physical characteristics of the rural and urban populations have tended to become more nearly alike. Urbanization of the rural population has been followed by a decrease in the birth rate, formerly higher than that of the city; the decrease in urban mortality has been followed by a similar decrease in rural mortality; and the suicide rate among the rural population has tended to increase, thus approaching more closely the higher suicide rate of the city. Moreover, the differences between rural and urban morbidity rates have tended to become less conspicuous. The increase of divorce in the city has begun to be followed by an increase in the country. In the field of indirect experience, as well as in religion, politics, education, aesthetics, and morals, the same tendency to approach a common type is found.

It is unnecessary to repeat the data given in the preceding chapters. We merely refer to them to verify our proposition that there is unquestionably a drawing together of the rural and urban worlds, whether it be for good or for ill.

This does not mean, however, that the differences between the country and the city will disappear completely in the future. Probably they will remain in a less marked degree, at least for the next few centuries. In order that the two societies should become exactly alike, density of population, mobility, occupational

composition, general environment, and conditions in regard to communication and intercourse would have to be the same. In spite of the process of *rapprochement* that we have described, identity of the rural and urban worlds in all these respects will always be impossible. Some differences will probably remain. Consequently, we expect that the two societies will continue, each performing its own social function, although the differences between them will diminish.

Since rural-urban differences are not likely to be entirely obliterated in the future, it is unlikely that the agricultural class will disappear. From 1,000,000,000 to 1,200,000,000 of the earth's 1,700,000,000 inhabitants still obtain their living by means of agriculture. It would take a long time to urbanize such vast numbers completely. The agricultural environment and occupation will remain somewhat unlike those of other occupations, though the agricultural class will undergo considerable change in a rurbanized society.

No one, of course, can predict what will happen in the course of thousands of years. But the changes that take place during the next few decades or even the next few centuries will probably be continuations of those that we have mentioned as indicative of rurbanization. In a slightly different connection we may say that we expect neither a wholesale replacement of small farms by large ones nor the reverse. We have indicated in chapter vii that both small-scale and large-scale farming will continue during the next few decades and possibly for centuries.

The problem of the village versus the isolated farm requires a more detailed discussion. Two questions arise in connection with it: First, does rurbanization mean a tendency for farmers and peasants to congregate in villages or does it mean a tendency to settle on isolated farms? Second, is it associated with a tendency for farmers and peasants to centralize or to decentralize their village life? Will large rurban trading communities in which nearly all rural interests are organized systematically around one center, such as Charles J. Galpin mentions below, actually come into existence?

To the first question, a highly complex one, it is hardly possible to give a definite, consistent answer at present. Two conflicting theories appear in the literature. One maintains that the isolated

farms are constantly being replaced by villages, and will continue to be; the other asserts the exact opposite.[7] In the first place, the effects of urbanization in this field are various and in part contradictory, favoring in some respects the replacement of villages by dispersed farms and in others a centripetal movement. The centrifugal forces include improved transportation of all kinds, which enables settlers to live at a considerable distance from villages or towns (this factor may operate in favor of centralization also); improved conditions of safety, which remove the need of concentrating for purposes of protection; greater rationalization of farm enterprises, with a consequent increase in efficiency; a diversification of farming; an increase in the number of live stock per acre, in buildings, equipment, operating capital, and other items that must be watched by the owner; the growth of an independent spirit to which village life with its perennial interest in one's private concerns is distasteful; and the development of complicated farming processes that require the owner or operator to live on or near his farm for longer periods of the year. John M. Gillette sums up these factors as follows:[8]

These plans of and proposals for farm villages possess both interest and value; nevertheless they are confronted by several obstacles and objections. First, the great majority of American farmers have much capital invested in houses, barns, other buildings, orchards, and other home equipment on their separate allotments of land. To make a change to such a completely different system of living as the farm village represents would involve the destruction of much of the capital so invested and the incurring of a large removal expense. The economic loss involved in the proposal is so heavy that we cannot expect seriously to see it executed.

Second, to the average farmer it would seem a costly inconvenience to drive several miles daily to carry on his farm work. Where farms are

[7] See, for instance, Newell L. Sims, *Elements of Rural Sociology,* New York, 1928, pp. 512 and 629; John M. Gillette, *Rural Sociology,* revised ed., New York, 1928, pp. 542–543; Edmund de S. Brunner, *Village Communities,* New York, 1927, p. 39; Gilbert Slater, *The English Peasantry and the Enclosure of the Common Fields,* London, 1907, p. xiii; Demangeon's paper in chap. v of this work; M. A. Lefèvre, *L'habitat rural en Belgique: étude de géographie humaine,* Liège, 1926, pp. 27, 82, and *passim;* André Siegfried, *Tableau politique de la France,* Paris, 1913, chap. xxxiv; Kanichi Asakawa, *The Early Institutional Life of Japan,* Tokyo, 1903, pp. 196 ff.; James M. Williams, *An American Town: A Sociological Study,* New York, 1906, pp. 34 ff.; Lowry Nelson, Brigham Young University Studies, 1925, Nos. 1, 2, and 3; Dwight Sanderson, *The Rural Community,* Boston, 1932; and Walter A. Terpenning, *Village and Open-Country Neighborhoods,* New York, 1931. See the bibliography given in chapter v.

[8] Gillette *op. cit.,* pp. 542–543.

small, as most of them are in Europe and to a less extent in the irrigable sections of the United States, the distances to the outlying land are not great. But the average-sized farm in the United States is 147 acres. Were the farm village large enough to be of any social advantage it would contain probably 100 families. This being so, in a district composed of average-sized farms the more remote farms would be about four or five miles removed from a centrally located village. This would mean a daily drive of eight or ten miles in order to carry on farm work, which is practically prohibitive because of the economic loss involved.

Third, a small village of the usual type possesses questionable advantages socially when compared with the open-country communities. Without the fuller social life, intellectual interests, ideals, and resources of the larger urban aggregations, the petty gossip, jealousies, and bickerings are not conducive to increased satisfaction or a higher existence. The paucity of recreational and amusement facilities, the almost entire absence of those of a wholesome kind, especially for boys from ten to sixteen years of age, engenders idleness and the resorting to vicious gangs and forms of sport which are demoralizing. The average small village in the United States represents one of the most deadening and disheartening forms of community, and, as a problem, challenges the serious attention of the American nation.

But urbanization works also in favor of the concentration of scattered farms into villages. Among the conditions that stimulate this development are the increasing density of the population; the congregation of farms around the small factories; commercial, recreational, religious, educational, and cultural attractions offered by the village; improved means of transportation that permit the farmer to live at some distance from his land yet cultivate it without inconvenience; the replacement of a farm economy by a market economy; and increasing division of labor on the farm.[9]

It is almost impossible to predict which of these conflicting sets of influences will prevail. It seems unlikely that the tendency during the next decades will be all in one direction. Conditions in particular countries and regions will determine whether the process will be one of dispersion or of concentration. Since both villages and isolated farms have existed from time immemorial,

[9] For a discussion of some of the factors see Sims's work cited, pp. 512, 629, and *passim*. For an analysis of factors working in the opposite direction see Frédéric le Play, *La réforme sociale en France*, Vol. III, Paris, 1862, chap. xxxiv, and *The Organization of Labor* (G. Emerson's translation), Philadelphia, 1872, p. 72. See also Carle C. Zimmerman, *Siam: Rural Economic Survey*, Bangkok, 1931, chaps. ii, viii, and xiii.

it is unlikely that either will suddenly disappear. Theories predicting the growth of either to the total exclusion of the other appear to us one-sided and questionable.

The second problem to be considered is whether in the future the social services rendered the farming population—economic, educational, recreational, medical, religious, and political—will be centralized in one large local rurban area or whether they will be differentiated functionally and scattered territorially. Here again there is no unanimity of opinion. Some prominent investigators believe that in the future these services will be concentrated in rurban areas of which the centers are fairly large towns. Others think that trade will hardly be thus centralized. The first view was expressed several years ago by Galpin, the essence of whose theory is contained in the following statement.

> The problem of trade for farmers, boldly put without softening the blow in respect to the feelings of anybody concerned, is how the farm family is to come into possession of one complete, adequate trade center. We may leave out of account as a minor consideration the present or future opportunity for the farmer to trade in the large city. The heart of the problem, and it is a massive problem, is one of consolidating the various trade agencies of any one group of farmers—country stores, hamlets, villages—into one "smashing good" farmers' town. "Consolidation" is no new solution for farmers' problems. Consolidation in selling products of farms goes under the title of "cooperation." It has common sense back of it. It has good economic doctrine inside of it. It has many friends among statesmen and some friends among the farmers themselves. And this type of consolidation is winning its way slowly.[10]

Both this theory and its opposite are partly correct but they are one-sided. Actually the trend is more complex and involves the following elements:

1. The expansion of some types of trading over an ever larger territory.

2. The operation of others on the basis of the present territorial units or smaller ones. These two types may be illustrated by the purchase of convenience goods and shopping goods—for example, groceries and clothing, particularly fine clothing and millinery. Groceries are purchased regularly, at fairly standard prices, not

[10] Charles J. Galpin, *Rural Social Problems,* New York, 1924, p. 72. See also all of chapters v and xv.

much above the wholesale costs. Fine clothing, on the other hand, is bought by the family on occasional visits to the larger centers of trade, where a greater variety of goods may be obtained.

3. The tendency of other services, such as government functions, commercialized recreation, and secondary education, to be organized on a basis of larger geographic units than in the past.

4. The tendency of various services to continue on a basis of small geographic units. These services include the marketing of certain products, the purchase of bulk products, connections between general and individual transportation routes (such as between railways and roads or waterways and roads), primary education, recreation of a noncommercial kind, and agricultural production.

A rapid change is taking place in the selling of farm products. They are no longer refined and processed on the farm; instead, they are transported as raw material to the nearest collection center or market. The modern farmer usually takes the cream to market instead of making it into butter at home. Flour is no longer ground on the farm; the grain is sent to the market to be ground into flour, which the farm family repurchases. Stock is less often butchered on the farm than formerly. Cotton gins in the home are being replaced by the local mills. Better baling is done there, the seed is used to better advantage by the cottonseed oil crusher, and the result is a superior product. Fruit is now taken to the local packing house, where machinery and standardized methods of packing are used. Waste products are being used increasingly. An example is the use of the cornstalk in making paper pulp. Potatoes, sweet potatoes, and yams are being stored in local warehouses rather than in crude farm "caves." All these changes lead to the development and preservation of local villages and at the same time limit the territory of some village trading operations very severely.

On the other hand, the automobile in America and good roads and other transportation facilities in Europe are causing the development upon an ever larger base of commercialized recreation and of certain kinds of buying, as well as of other functions formerly fulfilled in the village. The growth of secondary education, the increased centralization of governmental functions, and the development of state and territorial police functions and the

like are responsible for the development of some nonagricultural services.

5. The resultant of these conflicting tendencies will probably be the development of a large number of villages and towns, some large and some small, each sharing a part of the patronage of the farm family. Instead of towns and small cities that absorb the whole interest of the farm family, we may expect the appearance of many types of towns and villages, among which each family will divide its interests.

A comparable development has taken place in the city. The self-sufficiency of small communities has decreased steadily. Purchasers buy some things at the corner grocery and the local drug store and others at a somewhat more important shopping center farther away, while for still others they go to the city. Children begin by attending the neighborhood primary school; then as they grow older they go to a secondary school in some central part of the city; finally, they go to a university that serves the whole city or perhaps a larger area. In matters of taxation the smallest unit may be the city block; the next is the ward; the next, the entire city.

Similarly, we may expect to see increased decentralization, differentiation of function, and complexity in rural organization. "The concept neighborhood has come down to us from a distant past and therefore has connotations which scarcely fit the facts when applied to a patch of life in a modern large city."[11]

The school was found to be the strongest factor in the maintenance of primary group consciousness. Intergroup consciousness was developed best through the consolidated high school, followed by the church, the lodge, and the store. Neighborhood boundaries were cut across in the efforts of the people to reach preferred points for such service as church, trade, school, lodge, and blacksmith shop. Thus a farm family has at a given time a number of separate and conflicting group loyalties.[12]

The following table, which shows the smallest towns in Minnesota that will support stores of given types, substantiates the thesis

[11] See Roderick D. McKenzie, *The Neighborhood: A Study of Local Life in the City of Columbus, Ohio,* The University of Chicago Press, 1923, pp. 346 ff. McKenzie asked his students at Ohio State University to define their neighborhood. The replies ranged all the way from "my block" to "my part of the town."

[12] E. L. Morgan and Owen Howells, *Rural Population Groups,* University of Missouri Agricultural Experiment Station Research Bulletin No. 74, p. 5.

that the more specialized forms of buying are done in larger centers.[13]

Population Necessary to Support Stores of Various Kinds in Minnesota

Type of Store	Population of Town
General	No lower limit
Hardware	No lower limit
Drug	500
Grocery	1,000
Furniture	1,000
Jewelry	1,000
Men's clothing	1,000
Shoe	2,500
Variety	3,000
Ladies ready-to-wear-clothing	3,000
Dry goods	3,000

Minnesota villages, of course, differ in size. The following table gives the number of villages and towns of various sizes during the years from 1905 to 1929.[14]

Number of Trade Centers of Various Sizes in Minnesota, 1905–1929

Size of Center	Number of Villages					
	1905	1910	1915	1920	1925	1929
0– 500	1,308	1,323	1,371	1,339	1,307	1,272
501–1,000	108	125	132	134	138	135
1,001–2,500	83	90	89	87	99	103
2,501–5,000	22	22	21	23	31	30
5,000 and above *	14	19	23	24	24	24
Total	1,535	1,579	1,635	1,607	1,599	1,564

* Exclusive of Minneapolis, St. Paul, and Duluth.

These facts suggest [according to Vaile [15]] that in any area there is a real social need for towns of various sizes, ranging all the way

[13] H. B. Price and C. R. Hoffer, *Services of Rural Trade Centers in Distribution of Farm Supplies,* Minnesota Agricultural Experiment Station Bulletin No. 249, 1928, p. 12. See also C. R. Hoffer, *A Study of Town-Country Relationships,* Michigan Agricultural Experiment Station Bulletin No. 181, 1928, p. 5.

[14] From Carle C. Zimmerman, in Minnesota Agricultural Experiment Station Bulletin No. 269. Data are from Bradstreet's credit rating books.

[15] *The Small City and Town,* ed. by Roland S. Vaile, University of Minnesota Press, 1930, pp. 12–14. See especially the papers by Roland S. Vaile and Paul D. Converse.

from those which provide little more than general stores to the city of 15,000 to 25,000, which is large enough to provide for all the immediate community requirements.

Some idea of the number of inhabitants necessary for the successful operation of retail establishments may be gained from the survey of eleven cities which was conducted by the Department of Commerce in 1926. These data show the actual number of people per store in the cities surveyed. . . .

Type of Store	Number of Inhabitants per Retail Store (All Cities)
Art and antique	13,371
Automobile	6,673
Bakery	2,548
Boot and shoe	3,346
Building material	6,960
Cigar and tobacco	2,071
Clothing, women's	4,063
Confectionery, ice cream, and soft drinks	1,017
Department	53,486
Drug	1,545
Dry goods and notions	2,065
Gasoline and oil	1,643
Grocery and delicatessen	325
Photographic supply and camera	63,483
Radio	18,309
Restaurants	813
Toy and game	83,860

These data, supplemented by others concerning the distance that farmers travel to obtain various commodities and the success and failure of retail dealers in small towns and villages (see Converse's paper cited), confirm the thesis presented here.[16]

[16] See J. H. Kolb and A. F. Wileden, *Special Interest Groups in Rural Society,* Wisconsin Agricultural Experiment Station Research Bulletin No. 84, 1927; J. H. Kolb, in the Wisconsin Agricultural Experiment Station Research Bulletin No. 58, 1923, pp. 5 ff.; Carle C. Zimmerman and Carl C. Taylor, *Rural Organization,* North Carolina Agricultural Experiment Station Bulletin No. 245, 1922; E. L. Morgan, *Mobilizing the Rural Community,* Massachusetts Agricultural College Extension Service Bulletin No. 23, 1918; E. A. Taylor and F. R. Yoder, *Rural Social Organization in Whatcom County,* Massachusetts Agricultural College Extension Service Bulletin No. 255, 1928; Washington Agricultural Experiment Station Bulletin No. 215, 1927; Perry P. Denune, *The Social and Economic Relations of the Farmers with the Towns in Pickaway County, Ohio,* Ohio State University Studies, Bureau of Business Research, Monograph No. 9, 1927; A. W. Hayes, *Some Factors in Town and Country Relationships,* Tulane Uni-

Evidence of the truth of the thesis is found also in the fact that the cumulative community in which there is little or no functional differentiation is tending to be replaced by a rural community in which such differentiation has taken place. Some service centers remain concentrated within a small area; others spread out over a much larger area. The unity of the latter arises out of the fact that they perform a particular function; territorially they cannot be called units. Finally, in the future a few service agencies will be national and even international.[17]

The following readings substantiate some of the theories discussed above. Meuriot's paper discusses trends in urban-rural relationships. Van Gennep's paper formulates the rôle of the agricultural class, the preservation of the national culture. The paper entitled "America's New Frontier" and the one by Krische outline certain revolutionary tendencies, especially decentralization

versity Research Bulletin, 1922; The Mankato Survey, unpublished MS, University of Minnesota School of Business Administration, 1929; Morris Copeland, section on "Marketing" in *Recent Economic Changes in the United States* (Report of the Committee on Recent Economic Changes of the President's Conference on Unemployment), Vol. II, Washington, 1929; J. F. Page, *Relation of Town and Country Interests in Garfield County,* Oklahoma Agricultural Experiment Station Bulletin No. 194, 1930.

[17] Since this analysis was prepared, some further studies have come to light which strengthen these conclusions in some respects and alter them slightly in others. First, it appears that the so-called functional community is more common than many analyses lead one to believe. Even the Asiatic village appears to be much more differentiated in its service areas than most discussions imply. This differentiation exists in the self-sufficing agricultural areas in the interior of Asia as well as in the commercialized areas along the rivers, railways, and seacoast. The length of time sales are held in each market is based largely upon the division of the trading interests of the peasants among several centers, just as they are divided among different types of trading towns and villages in the United States and in western Europe. A temporary, but repeated, one-day market in a village, meeting once a week, has a different service area from that of a three-day market or a permanent market. As far as anyone knows, this differentiation of service areas has existed in Asia during periods of peace and prosperity from time immemorial. Second, the sociological results of the development of the large rurban trade center in western society seem to have been somewhat exaggerated. Careful studies of the differentiation of trade centers in America and Canada since the coming of roads and automobiles show no fundamental changes in the type or course of the curve of differentiation. It appears that the chief difference between the primitive self-sufficing community and the commercialized agricultural community based on the automobile lies in the amount of goods purchased at all trade centers and the frequency with which individuals come into direct contact with trade centers. The significance of recent changes seems to have been exaggerated in so far as they have been taken as signs of the existence or approach of a new era. See Edmund de S. Brunner's study of rural Korea in Volume VI of the Jerusalem Conference of the International Missionary Association; *Ching Ho,* published by the Department of Sociology, Yenching University, Peking, China, 1930; Carle C. Zimmerman, *Siam: Rural Economic Survey,* chap. ix, and University of Minnesota Agricultural Experiment Station Bulletin No. 269, 1930; and forthcoming studies of the rural social organization by the Canadian Pioneer Problems Committee, under the names of Carl A. Dawson, Carle C. Zimmerman, and Nathan L. Whetten.

and the growth of the white-collar class, both results of the ever increasing application of electricity. The paper of Kawada discusses the future of the Japanese peasantry and of the agricultural class in general, while that of Joseph Weigert depicts the differences between the old village culture and the new and suggests methods for preserving and restoring the valuable elements in the old.

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207. PAUL M. MEURIOT: TRENDS IN RURAL-URBAN RELATIONSHIPS *

The formation of urban centers is due neither to chance nor even to local causes. It proceeds from, or rather it is an aspect of, the phenomenon of the setting of populations in motion, a phenomenon caused in part by the creation of new labor centers and in part by the infinite facilities for travel. The more these causes operate, the greater will be the development of centers, and in the present state of our civilization it is impossible to foresee the end. Moreover, increasing urbanization is part of the very essence of an advanced civilization; there was concern for the problems it presented even in ancient Roman times. Cicero distrusted the customs and the unrest of the large maritime cities, indeed—probably on account of the free mingling of populations there. Sallust [1] indicates that the abandonment of the country was one of the causes of the ruin of the ancient Roman constitution, and the famous words of Pliny [2] concerning the latifundia, as well as the lamentations of Seneca, have come down to us through history.

The same complaints were heard eighteen centuries later when the development of cities began to be marked in modern Europe. (We are

* From Paul M. Meuriot, *Des agglomérations urbaines dans l'Europe contemporaine,* Paris, Belin Frères, 1898, pp. 449–453. Translated and printed with the permission of the publisher.

[1] *De republica,* II. Salust, *Catilina,* chap. xxxvii. If Aristotle condemns the large cities, it is not only because they seem to him incompatible with public order but also because they furnish too many artisans and not enough men of arms (*Politica,* VII, iv).

[2] Pliny, XVIII, VII, 3: *"Latifundia perdidere Italiam, jam vero et provincias."* Seneca writes, in his turn: *"Aspice agedum hanc frequentiam cui vix urbis immensae tecta sufficiunt: maxima pars illius turbae patria caret; ex municipiis et colonis suis, ex toto denique orbe terrarum confluxerunt."* (*Consul. ad Helviam,* VI.)

not speaking of isolated cases.) In the eighteenth century Rousseau [3] condemned this concentration of men, saying that "they are not made to live in ant heaps, but scattered over the earth that they cultivate." One recognizes here an echo of his declamations against civilization in general, but he is more exact when he complains that races degenerate in cities and that the country must continually renew them. The *Encyclopedia* complains that manufactures and commerce cause the desertion of the country: "Cities are kinds of colonies that the country is obliged to repopulate yearly." [4] One finds similar complaints in *L'ami des hommes* of Mirabeau, but he does not think that cities are a dangerous inutility; he simply asks that nothing be done to encourage their development. In Germany, one of the founders of statistical science, Süssmilch, opposed large cities. "They are," he wrote, "ornaments of the state, but very dangerous monstrosities also."[5]

In eighteenth-century England such economists as Forster and Nathaniel Kent [6] declared themselves opposed to the system of enclosures and the extension of urban centers. Adam Smith and Arthur Young,[7] on the other hand, defended this revolution. The latter explained how cities furnish useful employment to persons freed as a result of the extension of large estates or properties in the country. He admitted as a principle that half of the population of a prosperous state must inhabit the cities.

In our century more than one economist since Jean-Baptiste Say [8] has occupied himself with the question of urban centers. Writing after 1850, Blanqui said that migration towards cities could not last. But it has lasted, and contemporary writers,[9] whether they deplore the fact or merely accept it, offer no solution of the problem. It is indeed true, as we have already said, that this phenomenon is due to causes of a general nature, and one errs if one compares it to that which occurred in the ancient world. Antiquity was acquainted neither with free labor nor with great industries; the man who migrated from the country to the city inevitably became a beggar and a charge of the state. Is it the same today? It is not the caprice of great landowners,

[3] Jean J. Rousseau, *Émile,* Bk. I.

[4] See the article "Population." [See also chaps. i and ii of this work, where these opinions are given.]

[5] *"Die grossen Städte sind Zierden des Staats, aber auch zugleich höchst gefährliche Ungeheuer."* See Johann P. Süssmilch, *Die göttliche Ordnung,* Berlin, 1775–1776, I, 21.

[6] "Great towns are destructive both to morals and health and the greatest drains we have." Nathaniel Kent, cited by Wilhelm Hasbach in *Die englischen Landarbeiter . . . ,* Leipzig, 1894.

[7] See Arthur Young, *Arithmétique politique,* The Hague, 1775, and *Voyage en France,* II, 317.

[8] Jean-Baptiste Say, *Cours complet d'économie politique pratique,* Paris, 1844, chaps. ix–x.

[9] Baudrillart, Beaulieu, Levasseur, and others.

nor even the appeal of any kind of spectacle, that urges a part of the rural population towards the cities. Rather it is the greatest economic revolution that the world has ever seen, the complete transformation of the methods of industrial and rural labor. Formerly, when country laborers migrated to the cities, there was an absolute decrease of work in the fields. Today the machine supplements the man and the fields are better cultivated with a much smaller number of agricultural laborers than were necessary previously. We have shown that urban centers do not impoverish rural populations; that instead the latter profit from the wealth that the cities produce. Cities, on the other hand, play a rather more preservative rôle in general economic life than one generally thinks. Let us suppose that a rural population is forced to emigrate because of overpopulation or for some other cause. If there were no industrial centers, would we not have to fear that this population would go to some foreign country? Urban centers retain a more or less notable contingent of emigrants and keep them on national soil. In England and in Germany, for example, the current of emigration to other countries is counterbalanced by the attraction of the great centers. Rural emigration in France seems considerable only because of our low birth rate. This low birth rate permits the foreign element to be introduced into our urban centers in greater proportion than in other countries except Switzerland.

It is undoubtedly true that the large centers attract a part of the population from the country, but it is wrong to say that they depopulate it. These internal migrations are actually not a depopulation but rather a transformation of the method of populating a country. The essential thing for a state is first to conserve and increase its human capital so that its people may live the rural or urban life. In all European states the population is increasing on the whole, and it appears that migration to the cities has not had a restrictive effect in this respect.* Only in France is there really a general rural depopulation, which has been evident for half a century; this is due, however, either to an excessive death rate or to a birth rate that is insufficient to fill the vacancies left by emigration.

Cities are not a cause of depopulation; at the same time, their growth accompanies political and economic development. The more states increase their population or their power (in any respect whatever) the more their [human] capital increases. The city is in a way the *sensorium commune* of the country. In it is summed up the spirit of a nation or of a race, just as great local centers may synthesize the spirit of a province.

* Editors' Note.—As is indicated above, most of the western countries are now at the initial stage of depopulation.

These great centers, after they have reached a certain age, generally become more or less influential intellectual centers. The valuable scientific and artistic materials that necessarily are collected in cities serve to educate the mind. The great epochs of the human mind have been contemporaneous with the development of cities. Italy at the time of the Renaissance had a civilization that was essentially urban.

But in addition to these advantages cities have their disadvantages, which we have not concealed while studying the effects of urban agglomerations. We need not say again that they sometimes have harmful effects on vital indices and on the moral, social, and political order. If, therefore, the rôle of the public authorities in regard to cities is the amelioration of their material and moral condition, they must do nothing that might produce an exaggerated development of these large centers. Their force of attraction is sufficient today and will be sufficient tomorrow.

And yet, it is undesirable for cities to pass through a period of decadence.[10] Such a situation would indicate a standstill or a decline in the general civilization, and the rural population would have nothing to gain by that state of affairs. We have shown that there is a rigid economic solidarity between country and city, greater in France, perhaps, than anywhere else.

Our only desire is a change in the organization of labor that will ameliorate the conditions of life among the urban masses. Already ease of transportation, something unknown to our forefathers, partially relieves the cities of the burden of too great density of population. Another innovation, transmission by electrical force, may produce entirely different results. The first will probably be the placing of the industrial worker by himself, apart from large masses of men, and the consequent elimination of the concentration of workingmen in factories that modern machinery has made necessary. Who knows what the effects of such a transformation might be? The extreme development of urban centers was born of a scientific revolution, and a remedy for the evils that this extremity brings with it may be born of another scientific revolution.

208. Arnold van Gennep: Rural Classes, Nobility, and Nationality *

In any attempt to evaluate the rôle played by the different social classes in the formation and maintenance of nationality and to discern

[10] Levasseur, *op. cit.*, II, 413 ff.

* From *Revue de l'Institut de sociologie,* I, 201–202 (1921). Translated and printed with the permission of the publishers. There are also twenty additional pages of illustrative historical material.

the general relationship between nationality and the division of society into classes, it is necessary to take care to distinguish in each case the time, the place, and the particular type of civilization. . . .

It is necessary first to state that the current distinction between social classes, which is due to the rise of capitalism, is not the classification necessary for the problem in hand. We group together all peasants (free peasants, farmers, small farmers, and serfs), all landed proprietary nobles, including both the great and the minor nobility, and all bourgeois farmers (business men with country estates, for example) in one category. In a second category we place the nobles of the crown, the officials, the citizens in the true sense of the word—that is, city residents—manufacturers, and laborers. It is among the first named group of classes that the nationalistic tendency is fundamental and most highly developed. The second group have been carried along by the movement or, in the case of Marxist socialists, have actively opposed it. Intellectuals are found in both camps.

A second general observation is that a nationalistic movement succeeds only when the great majority of the rural population has been directly concerned in originating the movement or has adopted it from nonrural individuals, groups, or organizations. The reasons are that the peasants in every country are the dominant force on account of their numerical superiority and occupational cohesion and that they are the primary economic factor. Formerly, when rural people participated in a social movement or an internal political movement, the result was a jacquerie or a Pougatchovism that was drowned in blood; but no foreign domination has been able to succeed if it has been actively opposed by the agriculturists, usually called "the people." This organized activity of rural people began in France during the Hundred Years' War, but it has been established upon a national basis in some countries, such as Ireland and Poland, only since the last quarter of the nineteenth century, and it has imposed its will upon the other social classes of these nations or upon foreign conquerors only since the last war.

In Europe the ownership of land has passed through a number of stages with varying effects upon nationalistic tendencies. In the majority of cases such a tendency has been dependent upon an agrarian movement; it is only since the decline of the feudal system with the dissolution of the large estates and the rise of landownership among cultivators through the system of small holdings that the sentiment of nationality has been able to direct the activities of the rural masses towards a common goal of independence. Previously the same masses were completely absorbed in the earning of their daily bread. Thereafter, ownership of land assured the peasants relative ease, or at least

security for the morrow, and it gave opportunity for instruction in and propaganda for nationalism.

209. America's New Frontier *

A careful study of present-day industrial practices and trade currents in America suggests that a profound and far-reaching change in our business life (and, necessarily, in our civilization) began about 1910, and is now revealing itself gradually but definitely. This change is the decentralization and the wider spread of industrial activities, and a more general diffusion of wealth and good living over the land.

Unlike former economic advances and geographical shifts of business, this new trend has been relatively independent of population density, growth, or movement. It has its basis rather in the changes in the nature of power supply during the past decade or more.

In a civilization based on power, the sections of the country will thrive or decline according to whether they have power or lack it.

The power supply upon which American progress up to 1910 was based had one serious defect. It was confined. Ample, reliable, cheap power was to be had only within limited and more or less densely populated areas. This, of course, tended to centralize industry. The significance of the date 1910 is, roughly speaking, that it was the year which witnessed the beginning of widespread distribution of power—a power supply diffused over the countryside, not confined to limited areas. . . .

This, naturally, represented tremendous progress. But the power supply of the nineteenth century and the early years of our own century was not distributable power. That is the important difference between the power supply of today and the power supply of yesterday. Steam power had to be used where it was generated. It could be transmitted no further than the length of the leather transmission belt. Electric power, likewise, although it could be transmitted from one end to the other of a single community, could not be transmitted any more widely than that in its early days. The consequence was that both steam power and early electric power caused concentration of industry in the vicinity in which the power was available. It was characteristic of electric power, in particular, that it could be delivered cheaply only to a compact and relatively congested population. Where population was sparse or communities remote, the electric power supply was proportionately inadequate for industrial development. . . .

Until the period 1910–1912 electric power was only another centralizing influence. . . .

* From *America's New Frontier,* Middle West Utilities Company, Chicago, 1929, pp. 1–79.

Just as the construction of the railway network made possible the typical American civilization of the latter half of the nineteenth century, so the construction of the network of power lines in the United States heralds the typical civilization of the twentieth century. It is indicative of the swift tempo of our day that the spread of the network of power lines is now proceeding at a much more rapid rate than the construction of rail lines in the early years of railway empire building. In the seven years 1921–1927 inclusive, the sum of $1,091,774,405 was spent for electric transmission lines. The value of all the railway-operating property in the United States after three-quarters of a century was only $11,244,852,000. . . .

It was not until it became possible to transmit electricity over considerable distances, and not until it had been demonstrated that it was profitable to do so because work could be found for widely distributed power, that an adequate power supply could be made available over widespread areas, irrespective of population density. Then it was that electric power became an active force for decentralizing industry, thus reversing the prevailing currents which had characterized business enterprise since the industrial revolution of eighteenth-century England. . . .

These principles are now, of course, the common property of the American people. They are being applied in every part of the country by the large corporate organizations which are in effect reorganizing the life of America by giving to every nook and corner of this country equal access to energy, the primary requisite of all civilization. . . .

Engineers, economists, and business men now perceive that when the scattered communities of our new frontier are given a power service comparable to that of the cities, they are relieved of the handicaps which previously diverted the industrial activities from small communities to the centers of population. The adequately electrified community can accommodate industries which seek a new location. Thus electric power has blazed the trail to the new frontier for the factory.

There were 13,268 incorporated communities in 1920 with less than 2,500 population; and 42,073,705 persons, or 39.8 per cent of the entire population of the United States in 1920, lived outside incorporated places on farms or in tiny communities, the trade of which is, of necessity, carried on for the most part in larger communities.

In 1912 hundreds of these communities were less industrial and had a less diversified business life than they had enjoyed twenty, thirty, or fifty years before. The small handicrafts, the local foundry, wagon shop, flour mill, and other such industries had been largely displaced by the flood of cheaper and sometimes better goods from large-scale factories in the greater towns.

The small industrial plants scattered throughout the countryside, a large part of them located on small intermittent water powers, with the machinery geared directly to the ancient water wheel, had disappeared or were going out of existence when the centralizing forces of the steam engine and railroad attained their maximum effectiveness, about 1907. This process is still going on side by side with an expansion of highly modern industrial activities out to the small communities. Simultaneously with the building of hundreds of modern factories in the smaller factories in the smaller communities we had and still have the closing down of many primitive small-scale plants and industries, so that mere statistics very frequently give the impression of an increasing concentration of industry, where the most significant trend is in the other direction.

The wiping out of the older decentralized industry may for the time being surpass in volume the growth of the new decentralization of more advanced industry. It is in these vast areas and these communities outside of the metropolitan centers that the most interesting and characteristic industrial and social changes are now taking place. It is in these communities that the future of America is very largely being forged. This is America's new frontier. . . .

The small town is the pivot of the reorganization of America now in process. Let us look at the American small town from the standpoint of modern science and technology. It will give us a new point of view and we will behold a new picture, because the small town suffers today from psychological handicaps which derive from history and emotional habits inherited from the past. The backwardness of our so-called modernistic literature and the failure of modern writers to keep abreast of the developments of science and engineering is revealed by the fact that contemporary literature and social thought reveal but scant recognition that electrical power has been rejuvenating and enriching the life of the small community faster than that of the great urban centers. . . .

Much of the misconception of the importance of the small town comes from our habit of ranking nations, states, cities, and towns by their population. . . .

Comparison by population is obsolete. In the age of electrical power usable anywhere, any time, available man power no longer sets a limit to the wealth and buying power of a village. . . .

Electric power used in small communities goes directly into net gains of productivity and better living in a degree not equaled in the great cities where a large part of the power consumed is used in overcoming the handicaps of congested habitation. The massing of great populations on limited areas automatically creates conditions which

must be overcome by the employment of a large per cent of the available power and human labor of great communities.

To put it in the raw, city dwellers must pay heavily in labor, power, and money merely to get out of each other's way. Probably the most familiar aspect of this situation is the high cost of distribution of foodstuffs within metropolitan areas. It is no unusual thing for a box of strawberries to be delivered to Chicago from Milan, Tennessee, at a cost of 8 cents per quart, which includes all that the landowners, growers, and pickers received, plus the railroad freight and refrigeration costs. By the time the consumer gets the quart box its price has risen to 35 cents. Yet a margin of 27 cents as a rule represents no exorbitant profits between the freight train and the dinner table but on the contrary is the price of a large number of services rendered, many of which are made necessary by the physical conditions resulting from population density. This homely instance pictures on a small scale what happens with regard to urban labor and to electric power generated and distributed in great cities.

The per capita use of electricity in such districts is very high, but power must be diverted to subways, elevateds, street railways, elevators, pumping water to great heights in tall buildings, and many other services which are not required where people are less crowded. Electric traction, mostly in metropolitan cities, consumes over 11 billion kilowatt hours of electric energy yearly. This is a sizable portion of the total central station output of 87 billion kilowatt hours in 1928. Tall buildings, cavernous streets, and dark rooms demand an enormous amount of daytime lighting. Superficially, the higher per capita consumption of electricity in cities would seem to indicate a higher standard of living than that in small communities with a lower per capita consumption, but a large part of the urban use of electricity is required merely to level up the city dweller's plane of living to that already enjoyed by the inhabitant of the smaller community without recourse to, or the demand for, electrical or mechanical power. . . .

The fallacy of comparisons of communities by relative population figures extends to and permeates many of the comparisons of the wealth of communities of varying size. In the absolute sense, of course, great transportation systems, waterworks, sewer systems, and other costly apparatus of metropolitan life are wealth, and they figure in all the estimates of national wealth. The great skyscrapers, the construction of which is a direct consequence of concentrated population and the high ground values which result from such density, are an instance of hundreds of millions of dollars of absolute wealth which cannot be accurately used in calculating the relative wealth of large and small communities because the smaller communities, having no need for

such construction, and already enjoying every benefit that they can confer upon the city dweller, are disparaged if that sort of wealth be counted in comparisons.

Many things which are an absolute necessity in the city are luxuries in a small community. Street lighting in the great cities is absolutely essential and increasingly a defensive measure against the sinister forces of the criminal underworld. . . .

A large part of the "speed" of city life consists in frantic efforts to get to and from the job. In Chicago 29 per cent of all the electricity generated is required for railway and traction use. While, of course, this is a productive process and leads directly to the creation of economic values, it is also a cost of production which appears to increase at a much greater ratio than population.

The crosshauling of human passengers within great cities is in some respects similar to the crosshauling of freight in the country at large which is necessitated by the concentration of industries in the great cities.

It appears that the amount of car riding in New York increased about 55 per cent in a period in which population gained less than 15 per cent. In that we have an explanation of the phenomenon which has caused so much discussion in that great city, which finds that the more subways it builds the greater is the demand for subway transportation.

The diversion of a large part of traffic from rail lines to motor vehicles in like manner resulted not in relief but in intensification of street congestion.

The American Electric Railway Association estimates that delays in street traffic in New York result in an annual loss of $540,000,000, or $28,000,000 more than the city budget, and a large part of the city budget is a reflection in dollars and cents of the costs generated by massed population.

Owen D. Young, chairman of the board of the General Electric Company, in commenting on the New York situation has declared that the people of New York could better afford to buy property on Fifth Avenue and raze the buildings for parking places.

Traffic during the rush hours moving north out of the downtown district of Manhattan Island has an average speed of only four miles per hour. In discussing means of traffic relief Mayor Walker of New York has estimated that more than a half billion of dollars is necessary in the immediate future.

Back of all these figures in dollars and cents is a pyramiding of a demand for both human labor and mechanical power, caused by the growth of population upon limited areas. Much of the power applied

in the great centers of population is electrical, and therefore electrical power put to work in a small town profits the people more than the same amount of electrical energy used in a great metropolis.

A striking example of population congestion increasing costs of living at a greater rate than the increase of population is offered by the problems of water supply which confront all great cities. In fact, far-seeing engineers find that the difficulty of supplying water would fix the ultimate limit of the size of cities, even if no other force were at work. It is probable that the great metropolitan centers will reach their size limits in respect to water supply before they encounter any limit caused by industrial competition with the small town. The industrial development of small towns does not necessarily imply an accompanying decline of the big cities. It does serve, of course, as a preventive of excessive big-city congestion.

The water consumption of a great community increases at a greater rate than that at which the population grows. A town with a growth of 30 per cent of population in ten years will use 40 per cent more water at the end of that period. Not only consumption but wastage increases as population grows more dense. . . .

To add to available water supply in the city of Boston, a 13-mile tunnel and aqueduct is being blasted through solid rock from the Ware River to the Watchusett reservoir, which at present serves Worcester and the Boston metropolitan district. Eleven feet wide and nearly 13 feet high, this aqueduct will deliver nearly 35,000,000 gallons daily. Ten years will be needed for the completion of the undertaking, at an estimated cost of over $100,000,000.

The city of Los Angeles proposes, after the expenditure of $125,000,000 by the United States Government in the construction of a great dam in Black Canyon and other works, to lift 2,000 cubic feet of water per second over intervening hills more than 1,500 feet high, and to conduct water from the Colorado River over 150 miles to the coastal plain of the Pacific. This will require more than half as much electric power as was generated by the entire electric light and power industry of the United States in 1902.

Thus in many respects—water supply, transportation, elevators, and other inevitable accompaniments of congestion—a great part of the big city's power supply is diverted to functions which are not required in the small community.

When electric power is introduced into the smaller community, it either multiplies the productivity of all the workers in the community, thereby raising the average purchasing power, or it may displace some of them and cause their removal to the cities. The latter effect, while

not raising the total output of the community, nevertheless increases the average buying power of those remaining.

Hence stationary or decreasing population existing side by side with increasing prosperity is quite logical in our smaller communities. While the cityward movement of population persists, the only gain in number of industrial wage earners is found in towns of under 10,000. The smallest loss is shown by towns of 10,000 to 25,000. This is a striking illustration of the independence of industrial movements and population movements.

"The Department of Agriculture," it is observed in *Recent Economic Changes,* "has made us familiar with the migration of farmers from country to city; we know less of the movement which has carried manufacturing into the country. Between 1919 and 1925, while the 25 largest cities in the country lost 326,800 wage earners, about 12 per cent of the average number employed, the rural area (all area not included in communities having a population of 10,000 inhabitants) gained 55,204 wage earners. Nor is this decrease limited to the larger cities. Cities between 100,000 and 250,000 population lost even more heavily, 14 per cent of their wage earners; communities between 25,000 and 100,000 lost 11 per cent, and those between 10,000 and 25,000 lost 8 per cent of their wage earners."

Following are the figures for the United States as a whole, as published in *Recent Economic Changes.*

Size of Community	Number of Communities	1919		1925		Percentage of Change 1919–1925
		Number of Wage Earners	Percentage of Total	Number of Wage Earners	Percentage of Total	
Over 250,000	25	2,763,494	30.5	2,436,694	29.1	−11.8
100,000–250,000	43	1,016,388	11.2	873,813	10.4	−14.1
25,000–100,000	215	1,637,786	18.1	1,461,653	17.4	−10.8
10,000–25,000	456	954,600	10.5	874,749	10.5	− 7.8
Remainder		2,678,561	29.7	2,733,765	32.6	+ 2.1
Total United States		9,050,829	100	8,380,674	100	− 7.4

Undoubtedly the mounting costs of urban living, which are bound to be reflected in the production costs of industry, are largely responsible for the unmistakable movement of some of the most advanced of American industries to the smaller communities. Lower land costs, lower labor costs, better living and working conditions, and lessening of fatigue are some of the more obvious considerations.

The most exhaustive study so far made of factory migrations from and to communities of varying size is that conducted by the Metropolitan Life Insurance Company and published in July, 1929. Although this study according to its own statement is incomplete and weighted in favor of the metropolitan centers because it covers 90 per cent of cities of more than 150,000 population and only one-third of towns under 10,000, nevertheless it shows that for the years 1926 and 1927 the balance of migration was strongly in favor of the smaller community. This is shown by the following table of factory relocations.

Section	From Larger to Smaller Community	To Community of Same Size	From Smaller to Larger Community
New England	113	30	67
East South Central	14	4	13
West North Central	5	13	22
Pacific	7	8	14
East North Central	81	64	65
Middle Atlantic	131	72	110
Total	351	191	291

(Size of communities not stated for West North Central, South Atlantic, or Mountain states.)

The growing industrial strength of the smaller community relative to the large centers is also deducible from careful analysis of the figures on the establishment of new industries, branch plants, and relocations of industries employing more than one hundred persons. Plants of that size are perhaps more characteristic of the advanced sections of modern industry than plants with smaller staffs which include many purely "satellite" industries in the large centers, and antiquated industries in the smaller towns. Two hundred cases of relocations of plants employing over 100 were divided as follows: 46 to cities of over 150,000; 40 to towns of 50,000 to 149,999; 74 to towns of 10,000 to 49,999; 42 to towns of less than 10,000. Two hundred and twenty-three cases of branch plant locations were divided as follows: 70 to cities of over 150,000; 45 to towns of 50,000 to 149,999; 47 to towns of 10,000 to 49,999; 68 to towns under 10,000. Three hundred and forty cases of new establishments were divided as follows: 129 to cities of over 150,000; 54 to towns of 50,000 to 149,999; 68 to towns of 10,000 to 49,999; 88 to towns under 10,000.

Industrial mortality was conspicuously greater in the larger cities according to the Metropolitan survey. Losses under the heading "out

of business" show 78 per cent in cities over 150,000 (compared to 13.5 per cent in towns under 50,000 and 5.1 per cent in towns under 10,000). Of the losses for which the reason "moved away" is assigned, 52.2 per cent were in cities over 150,000, 33.2 per cent were in towns under 50,000, and 12.9 per cent were in towns under 10,000.

The figures of the Metropolitan survey are now one and a half years old. They disclose a trend and a momentum which current industrial news as reported in the newspapers shows to be gaining.

New industries are of course being established in the larger cities, but the Metropolitan survey remarks significantly: "A country-wide summary attributes the bulk of the gains to the larger cities. This is principally due to the large number of 'satellite' industries, classified in this survey as new industries, starting up in the larger cities around the established industries." Much of this establishment of new industries was in the form of food industries, necessarily locating in densely populated sections.

However, there are other causes quite as irresistible, if somewhat less direct.

The demand for style and individuality in goods, which has become such a marked characteristic of business life in the last few years, has accelerated this decentralization. The more exacting demands of our highly prosperous people have caused manufacturers to alter their engineering methods to facilitate quick changes in line, form, and color. Spurred by this demand for flexible production, manufacturers have discovered new principles of mass production. This change in methods within the individual factory has made it more desirable to establish and maintain plants in smaller communities. . . .

The great automatic mechanisms, constructed to stamp out a stream of articles or parts all alike, as so many grains of wheat, are being replaced by simple machines, each machine performing some special operation, so that any one may be replaced in order to effect a change in production without impairing the usefulness of the others in the process. Plants so equipped are flexible enough to respond quickly to changes in the market. Such plants can be built for any given industry or industrial operation and they can also be split into parts and located at different points if economy dictates such location. The vogue of mere size is past in manufacturing, as management has taken to heart the lesson that mere bigness is no longer assurance of real manufacturing economy. . . .

The bearing of these facts upon decentralization of manufacturing processes is obvious, while the construction of highways and increasing use of motor trucks has served to equalize market conditions between large and small plants. This applies not only between small commu-

nities and large cities, but between cities of considerable size. For instance, a manufacturer of shopping bags, who delivers direct by truck to retail establishments in Chicago, has declared that his location in Indianapolis is just as good from a marketing standpoint as if his plant were in Chicago itself or its industrial suburbs. . . .

These changes in factory set-up and geographical subdivision in industries have been accompanied by another new policy. The production of all their raw materials or the manufacturer of all parts and accessories of their finished products is losing favor with great corporations. If the specialized producer can now do the job more cheaply he gets the order. The Ford Motor Company is the most conspicuous instance of this. As it swung into greater production in 1928 the company contracted with outside corporations for all of its storage batteries. It went outside for its steering gear, for one-third of its wheels, all of its shock absorbers, and many bodies.

Electrical energy available anywhere has been a contributing, and frequently is the decisive factor in all these innovations. The ability to ship by truck or rail from and to any point and available power supply at almost any place has made it possible for American industry to remove and remold itself at will.

The term "decentralization" does not mean that the large units of industrial areas are being broken up and moved out into the smaller towns. What it does mean is that the natural expansion of industry of today is directed into many smaller plants rather than into enlargements of existing big-scale plants. The business chief has an ever wider choice of locations with power available at any point at any time on a scale equivalent to that of the power supply of the metropolitan center. He can place one plant near raw materials, cutting costs of transportation from field, mine, and forest to the factory. Other plants using semi-finished products can be placed nearer choice markets, while still other plants of his chain may be located with an eye to the workers' welfare and contentment, taxation, and prices of land. One of the many statements which Henry Ford has made in advocating industrial decentralization is this: "Any small part entering into a finished manufactured product means a great deal of work. To make it in quantity calls for a lot of men. It is better to carry the part from the point where it can be made easiest and cheapest to the big plant where it is needed, than to transport the men. . . . Highly standardized, highly subdivided industry need no longer become concentrated in large plants. . . . A thousand or five hundred men ought to be enough in a single factory; then there would be no problem of transporting them to work or away from work, and there would be no slums or any of the other unnatural ways of living incident to the overcrowding that

must take place if the workmen are to live within reasonable distances of a very large plant." On another occasion Mr. Ford observed: "Is it efficient for business to pay high land prices and high taxes in congested cities where its workers must pay exorbitant rent, when by moving fifty miles into the country it could get low land prices, lower taxes, and lower rents—and far better living conditions for its people?"

Undoubtedly the census of manufacturers for 1927 reflects these movements in recording an increase in the number of manufacturing establishments from 187,224 in 1925 to 191,863 in 1927. This gain in the number of establishments in the two-year period was revealed in the midst of an era of mergers and consolidations of manufacturing companies, and also followed a period in which the total number of establishments had been declining rather steadily since 1919. The new trend revealed by the latest census reflects in part a net gain of decentralization, by the outward advance of more modern and highly organized industries, over the continued concentration of more primitive industries, as previously noted. . . .

For the smaller communities, these new industrial policies happily coincide in opportunity and the ability to avail themselves of the opportunity. It is to the smaller communities that industry principally must look for more economic locations, and these communities are ready for new industries because they have been electrified and because they enjoy the swift and flexible transportation of the modern highway and improved rail service. The extent to which the smaller communities have been prepared for the expansion of industry is indicated by a gain of 4,000 in the number of towns and villages served by electric light and power companies in five years. This is a growth of 25 per cent in a type of electric service available for shop and mill, a service to which isolated small-town plants are usually not adapted. . . .

The marked decline in rate of growth of railway freight transportation in recent years in the face of a continued concentration of population, and the increasing quantity of goods and services consumed per capita, to say nothing of the transportation demand of the great construction boom which began in 1922, clearly hints of the effects of the wide substitution of movement of power for the movement of materials.

In the seven-year period ending with 1906 the number of tons carried one mile increased 75 per cent: in the period ending with 1913 the increase was 38 per cent: in the period ending with 1920 the advance was again 38 per cent: and in the seven years ending with 1927 it was 5 per cent. Population increase during these periods has been practically constant. The smallest increase of population during these periods was 10 per cent and the largest only 15 per cent.

This slowing down of increase in net ton mileage continued in 1928. Class 1 railroads showed an increase of only 0.5 per cent over 1927, but a decrease of 2.4 per cent from the total for 1926. The eastern district showed a decrease of 1.4 per cent, the southern district showed a decrease of 5.4 per cent, but the western district reported an increase of 5.4 per cent. . . .

On the other hand, the consumption of electric power has increased 400 per cent during that same period (1913–1927). Electric power lines capable of carrying electric current great distances from large generating plants spanned more than 25,000 additional miles in the four years from 1923 to 1927. . . .

There are some available statistics which indicate that the smaller communities are making the most notable advance in good living. These statistics relate to material benefits such as better school buildings, new highways, and the nearly universal family ownership of the automobile and use of the telephone. Such facts lie at the base of leisure and liberty from drudgery. They are factual foundations of a life lived with keener zest and appreciation of the possibilities for individual development and expression than was ever possible before. States without great metropolitan centers lead in this procession in several major respects.

First, in better schools. Between 1917 and 1924 government school censuses show the following rankings of states in *percentage of increase* in school expenditures: *Current expenses* per pupil enrolled—North Carolina, Delaware, West Virginia, Maryland, Louisiana, Wisconsin, and Missouri. *Value of school property* per pupil enrolled—Mississippi, North Carolina, Nebraska, Delaware, South Carolina, Arizona, Texas, and Wyoming. *Outlay per pupil enrolled for new buildings*—Maryland, North Carolina, Delaware, Nevada, Maine, Georgia, California, New Hampshire, and Alabama.

Second, in new highways. The year 1927 saw 2,887,928 miles of certified highways in the United States, and estimated expenditures of over $1,000,000,000 for new construction and upkeep. Expenditures for rural roads per rural capita increased from $4.76 in 1914 to $19.70 in 1926.

Third, in the use of the telephone. The rural state of Iowa had more telephones in 1927 per 1,000 persons than any state except California. Illinois comes next, then Kansas, New York, and Nebraska. New Mexico has shown the greatest increase in telephones, 233 per cent since 1912. Florida, Louisiana, Nevada, and New Jersey follow in the order named.

Fourth, in the nearly universal family ownership of the automobile. In 1928 there was a motor vehicle for every 5.12 persons in the United

States. There were in 1920, the last census year, 4.34 persons in each family. Family ownership in the United States is approaching universality. In England, on the other hand, for purpose of comparison, there was one motor vehicle for each 37 persons.

As a rule, states with greatest rural and small-town population showed the greatest actual per capita automobile registration and greatest increase in automobile registration in 1928, as compared with 1927. In 1928 the ranking in persons per motor car was: California, Nevada, Iowa, Kansas, Nebraska, Oregon, South Dakota, Colorado, North Dakota, and Michigan. In percentage of increase, the ranking was: Arizona, District of Columbia, Mississippi, South Dakota, Montana, New Mexico, Alabama, Connecticut, Tennessee, and Texas. In both respects, the predominance of rural and small-town states will be noted. . . .

This is a new chapter in our social history. The advance of culture into newly opened lands is older than the covered wagon. The growing convenience of city life is older than the steam engine, but the revival and enrichment of smaller communities in older settled sections has come with the advent of the electrical industry supplying power so flexible that it can be instantly applied anywhere to any task, from cleaning a carpet to running a mill. . . .

Power delivered directly to the small communities, banishing household toil, has probably had an even greater effect in promoting finer living than power delivered to stores, shops, and mills. It is worth while to remember also the effect of electrical power upon the life of the home, in which some 18,000,0000 housewives carry on the most important work of the nation, although they never figure in the census totals of wealth, income, industrial production, labor, or trade. . . .

. . . In addition, movement of industry to the small community, so largely made possible by the electric power line, has directly benefited the farmer. . . .

American prosperity, welfare and wealth, and the hope of a better life, are so indissolubly bound up with the provision of an adequate and equal energy supply throughout this country that it may safely be said that this leadership has taken us far from the lean hard days, which millions already knew in America at the beginning of the twentieth century, when an American poet could write "The Man with the Hoe" and thrill millions. Today that poem is almost incomprehensible to the generation which has come to manhood and womanhood in an age of power-driven machinery. The old themes of toil and revolt are almost incomprehensible to the modern high school lad educated in an environment of chemistry, physics, radio sets, electric machinery, and gasoline motors—the very apparatus of man's victory

over drudgery. The youth of today has its eyes already in the clouds as the age of flight dawns to give even wider freedom from the bonds of space and time.

The modern farm lad who drives a tractor, controlling with the turn of his wrist the power of a herd of horses, the modern workingman who drives machines sped by the power of thunderbolts are both attuned to the new time of an empowered people—of masses who are masters of enslaved natural energies. The ancient world of servile toil assigned these powers to a god on a mountain. Modern engineering has enchained them as slaves of everyman.

210. Paul Krische: The Social Distribution of Industrial Employes in the Age of Steam Power and the Era of Electricity *

I. THE TECHNICAL BASIS OF OUR ECONOMIC SYSTEM

The data given in the German occupational statistics of July 15, 1925, concerning the progress of social stratification among employes, are remarkable; they do not show a great addition to the class of employes as compared to the last census, taken in 1907, but they show definitely a shifting within the class of employes, a sudden rise in the number of white-collar workers, clerks, and lesser officials, in contrast to the trend among the workmen. In this process, which is very evident even now, I see a development having immense economic, political, and social importance, and psychological effects of a singularly powerful kind in their influence upon the society of industrial countries. Before considering this in particular I should like to attempt a social analysis of this process and a study of the technical basis of production in the steam-engine era—the nineteenth century—as well as in the present era of electricity.

The most outstanding feature of the epoch of the nineteenth century, in which the steam engine was the basis of technical production, was the local accumulation of such a surplus of power that the work of hundreds of men and horses was performed at one place by a machine that, though somewhat awkward at first, slowly discarded superfluous material ballast and gradually became practical. Its many hundreds of horse power were distributed by means of steel cylinders and transmissions to drilling machines, planing machines, punching machines, and lathes. If this local concentration of power deprived thousands of

* From Paul Krische, "Die soziale Schichtung der Erwerbstätigen im Zeitalter der Dampfmaschine und in dem der Elektrizität," *Zeitschrift für Völkerpsychologie und Soziologie,* Vol. IV, Heft 1 (March, 1928). Translated and published with the permission of the publishers of the *Zeitschrift für Völkerpsychologie und Soziologie.*

artisans (weavers, knitters, and locksmiths) of their small productive establishments, if it turned them into a proletariat and forced them into factories, nevertheless a great many men were needed to control and give constant attention to boilers, transmissions, and machines. It led other thousands into the dark paths of the coal mines, where material that fed the hungry furnaces was mined ceaselessly.

This technical basis of production necessarily developed a proletariat in which industrial laborers formed the largest number, though they were followed closely by miners and metal workers. Thus the use of the idea of the proletarian with his flail and the metal worker with his hammer is typical of all labor poetry written in this period. However socialism may evolve in practical everyday politics, in social theories and in ideology it is definitely, though not exclusively, patterned to fit the miner and the industrial worker. The exigencies of the production process of the steam-engine era caused the miners and industrial workers to lead in the class war and to push forward the labor movement without abatement until through expansion it became eventually the most decisive and important of mass movements.

What is the chief characteristic of the present day from the standpoint of production technique? It consists less in an increasing accumulation of power in one place by means of electricity, which changed tens of thousands of horse power into hundreds of thousands, than in transmission of immense quantities of power to as many places as is necessary or desirable, a process also made possible in the first place through electricity. This almost complete revolution in the technical basis of production is of such vast importance, though even today it is not fully appreciated, that steam power with its restricted area of operation goes against its very nature and physical possibilities when it essays to fit itself into the economy of electrical power technique. Fixed as it is, it cannot leave the place of its creation. Since heated steam has only a short radius of action, even in well-insulated pipes, the only possible method is to use the energy of the coal not for the production of steam but for the production of power gas, which is produced in huge furnaces, and finally to conduct it into various towns where power is needed. The most important features of modern production technique are the immense facilities for the distribution of power and the almost unlimited concentration of power at the places of its production. Next in importance in the technique of production is the advance in the mechanization and standardization of forms of labor. Today it is usual for river barges with 500 or oven 1,000 tons of coal, the amount transported by a freight train, to be emptied into coal bunkers, and for the supply of coal to be brought to the rows of furnaces by dozens of huge caldrons. All this happens while the on-

looker sees not more than two or three workmen at the controls. In modern electrical power plants (Golpa, Tchernowitz), where millions of kilowatts are produced annually, one may see an endless number of empty boiler-houses in which a few stokers seem lost. On the giant switchboard two operators work; all around is vast emptiness. From this central point, however, thousands of factories are supplied with power. Big cities with thousands of outlets are supplied with light, all with the help of an infinitely branched network. For this are needed hundreds of skilled operators and technicians for making new constructions, for repairing, and for controlling. Hundreds, even thousands of supervisors, auditors, bookkeepers, and commercial and technical officials are needed to handle monthly the tens of thousands of meters, to write bills, to collect them, and so forth.

Another example drawn from modern industry is the dye plant of Leverkusen, the central plant of the immense trust of the dye industry. Here indeed the change to electricity has not yet been perfected; nevertheless one sees, instead of such masses of men as were found formerly in steam-power factories, wide factory rooms where much machinery is used. Even here, where steam power is still the basis of production, the entire force of 4,000 workers already includes 1,000 clerks and officials who are "socially eligible."

Another picture, taken from the potassium industry, presents a modern, rationally organized potassium chloride factory. About 1900 a potassium chloride factory produced daily 5,000 to 10,000 double centners of raw salts and employed 100 workers in this fairly large production. Today a modern potassium chloride factory that manufactures potassium chloride high in salt content from about 20,000 double centners of raw salt mined daily employs in its giant plant only about thirty workmen. Besides these thirty workmen, however, there is a far greater number than formerly of directors, chemists, laboratory assistants, technical and commercial officials, and testers, who are responsible for the care of the plant, the commercial distribution, and the improvement of the product.

It is also characteristic of the age of electricity that it makes possible the utilization of any desired amount of power in far-removed cities and settlements. Only by means of electricity, "the white coal," has water power finally attained to its greatest usefulness. In constantly growing numbers dams and dikes across valleys and rivers supply power plants for the production of electrical power, which in turn may supply the railroads of a whole country and all the agricultural and industrial works in the provinces.

But let these examples suffice. The important thing is that the force of circumstances, natural developments, the centralization and distri-

bution of power that now obtains generally, and the high degree of mechanization accompanying the era of electricity—the basis of modern technical production—has brought about a radical redistribution in all classes of employes, that is, among all persons who sell their working power. At least a tendency for such a redistribution may be observed. Especially remarkable is the fact that miners and industrial laborers lose the strategic and important place that was theirs during the steam-power era. Certainly they are still today the central group of the proletariat, but every day that adds to the extent of electrical power distribution weakens the importance of the man with the flail and the hammer, the typical manual laborer, and works slowly but surely to redistribute the working classes proportionately as electricity and mechanism take work away from unskilled laborers. The new economic system brings to the fore the formerly secondary category of the "more highly qualified workman," consisting of technicians, foremen, masters, commercial employes, technical men, traffic managers, all technical supervisors, and those who manage the commercial or technical distribution.

The old picture of the proletarian as the unskilled industrial worker fades, and that of the new composition of the working class reveals that there are almost equal proportions of manual workers and intellectual workers.

The consequences to be drawn from this are far-reaching and may be discussed now.

II. NEW DISTRIBUTION IN THE WORKING CLASS OR PROLETARIAT

. . . I come now to the main point of my statistical research, that is, to the stratification of the proletariat. Herein lies the main difficulty of the investigation, since earlier enumerations do not make the same classifications that were made in the statistics of 1925. Similarly, stratifications of the large groups of salaried employes, officials, and laborers, as well as their increase in the population as a whole, are impossible to describe, for the necessary data are not to be found in the 1907 census. The only information that exists concerns employed persons in general. Nevertheless, it is possible to draw comparisons, for we have the thorough compilation of the data collected in 1907 concerning the professional and social stratification of Germany, made by the economist A. Hesse.[1] Hesse has made the following threefold division, which concerns itself solely with the working members of the principal vocations.

Group I. Owners, proprietors, part owners, tenants, tenants by heritage, artisans, promoters, directors, and administrators.

[1] *Conrad's Jahrbücher*, 1910, XL, 721.

Group II. Officials, employes, managers trained scientifically, commercially, and technically, supervisors, and office help.

Group III. Laborers, other helpers, apprentices, factory hands, day laborers, and unskilled laborers. (This group includes also domestic servants and members of the family who give assistance.)

In the professional census of 1925 we find the first published statistics concerning the social division of vocationally active persons in Berlin, in sixteen large cities, in the province of Pommerania,[2] and also in the highly industrialized districts and in the strictly agricultural areas of Prussia and of the nation at large. The average for the nation, which is very likely to be published within a few months, will probably not deviate far from the average of the two extreme districts. A comparison of the years 1882, 1895, 1907, and 1925 yields the following results:

PERCENTAGE DISTRIBUTION OF THE WORKING POPULATION IN GERMANY, 1882–1925

GROUP	DATE	INDEPENDENT WORKERS	OFFICIALS AND SALARIED EMPLOYES	LABORERS, DOMESTICS, AND PERSONS ASSISTING IN THEIR ASSISTING IN THEIR OWN FAMILIES	LABORERS ONLY
Germany	1882	32.20	1.90	66.07	...
Germany	1895	28.94	3.29	67.77	...
Germany	1907	22.30	5.28	72.42*	...
Berlin	1925	15.40	30.50	....	45.9
16 large cities...	1907	17.30	....†	....†	...
16 large cities...	1925	15.10	31.10	53.80	45.5
Pommerania ...	1925	16.80‡	13.50‡	79.70‡	45.5

* The number given by Hesse corresponds exactly with Woytinsky's figure for laborers, including the members of the family giving assistance and domestic servants.

† EDITORS' NOTE.—These two classes taken together constituted 82.70 per cent of the working population.

‡ EDITORS' NOTE.—Apparently some mistake has been made in these data; the figures total 110 instead of 100.

. . . This table shows, first, a very large proportional increase in the group of salaried employes, as contrasted with the laboring group. In 1882, 66 per cent of the employed population were laborers, members of the family who rendered assistance, and domestics; and only 1.9 per cent were officials and salaried employes. In the year 1895 the per-

[2] *Wirtschaft und Statistik*, 1927, Nos. 3, 4, 5.

centage in the laboring group remained the same, but the percentage of officials and salaried employes rose to 3.29. It rose again in 1907 to 5.28 per cent, which represents the average of the country at large; however, this percentage increased in the year 1925 to 30.7 per cent in the large cities. The large cities at the same time show a decided dcrease in the labor group, which includes persons rendering assistance in their own families and domestic servants. If one considers the shift that has occurred in the typically agricultural province of Pommerania, one can see, in confirmation of my theories, a decided increase (to 13.5 per cent) in salaried employes and officials, while the laboring group, the group of those assisting in their own families, and the domestic servants show a fairly high figure, 79.7 per cent. Thus these statistical surveys confirm in an unexpected degree my investigation concerning the technique of production; for electrical production today, unlike steam-power production, has absorbed only a part of the last named group. One must consider that in the classification of 1925 the higher employes and officials are included among the salaried employes and lesser officials, but their number is so small that it makes little difference. In any case, on the basis of the examples cited from the occupational statistics of 1925 I may contend that the main thesis of my research is proved: that the change in the technical basis of production from steam power to electricity necessarily results in the increase of managers, supervisors, directors, and office help, a group trained technically, commercially, and scientifically, all of whom belong in the category of salaried employes and officials rather than in the body of workers of the type of the industrial laborers, not specially trained, who predominated in the steam-power era.

A particularly striking confirmation of the conclusions that I have reached through my investigation is brought forward in the recently published research of the Afa-Bund.[3] The following changes in personnel [in the proportion of salaried officials in the personnel of these plants] were found between 1914 and 1926 as a result of observations made in 600 industrial plants.

PERCENTAGE OF SALARIED EMPLOYES IN THE TOTAL OCCUPATIONAL POPULATION OF 600 INDUSTRIAL PLANTS

YEAR	27 WHARVES	3 AUTOMOBILE FACTORIES	45 MACHINE FACTORIES	11 RAILROAD CAR FACTORIES	10 ELECTRO-TECHNICAL PLANTS	49 SHOE FACTORIES
1913.....	7.5	9.9	13.5	7.7	31.8	7.8
1925.....	12.9	12.5	17.5	11.4	32.1	9.0
1926.....	16.9	18.2	20.1	12.9	32.1	9.1

[3] "Die Angestellten in der Volkswirtschaft," *Vorwärts*, May 1, 1927.

From these figures it may be seen not only that as the number of other employes in the present economic system increases it causes a decrease in the number of laborers, but also that the electro-technical plants are distinguished above all other industries for a high proportion of employes.

The explanation of this striking fact I have attempted to give in the first part of this work.

211. Joseph Weigert: The Old and the New Village Culture *

I. THE OLD CULTURE OF THE VILLAGE

Tradition and custom beautified life [in earlier times]. People were almost entirely secluded from the outer world. "What an uneventful life!" we may say. Nevertheless, people knew how to give meaning to the simplest happenings of life (and truly the ordinary things are the most important) in a manner peculiarly their own. They knew how to clothe them with religious and secular traditions. Custom provided for them a traditional life-order. People did not live according to their own will—most of them were long incapable of such a life. Their actions were regulated from birth to death by tradition. . . . The three sources of true peasant customs were religion (religious customs), the family (domestic customs), and work (customs of work).

The peasant knew well how to entertain and educate himself by means of folklore. The wealth of his sentiment and imagination expressed itself and reveled in historical sagas and traditions, in plant and animal lore, in the explanations of natural phenomena, and in fairy tales and jests. His knowledge and philosophy were acquired less from lifeless books and short-lived newspapers than from the ever flowing springs of religion, nature, and life.

The peasant read books also (folklore has been strongly influenced by literature); they were few, but sound, family books. They did not remain lifeless—they created life. Reading aloud from them and retelling them constituted the evening entertainment in winter. Thus, beyond doubt, legend was the cause of much that was good in the peasant life of former days.

The influence of the mother in earlier times is shown by Johannes Laicus (J. Wolf) when he records in *Aus der Kindheit* (Mainz, second edition, 1854), that he learned little in his earliest school years.

However, I made more headway at home with mother. There was no dealing with miserable letters but with the living word. Although she had not read the Bible, its spirit nevertheless permeated the woman and lived in her entire body. In her fervent, simple, yet profound manner she told me

* From Joseph Weigert, *Untergang der Dorfkultur?* Munich, Knorr and Hirth, 1930, pp. 23–33, 82–120. Translated and printed with the permission of the publishers.

the stories of the Old and New Testaments, the stories of the saints, and especially that of the Blessed Virgin Mary. She taught me the Confession of Faith, the Our Father, the Ave Maria, the Ten Commandments, the Five Commandments of Holy Church, and a great number of pious verses, sayings, and prayers. . . . She knitted or sewed or mended, sitting in the old wooden chair, while I sat on the footstool at her feet and listened reverently to every word. Whenever she felt particularly cheerful she also told me fairy tales.

Social life, as has just been shown, was fostered chiefly in the family. The domestic life was the most important. And what demands were made on the family! It was an association that worked and lived together, the place in which youth was brought up and educated, a hospital, and a place of recreation and entertainment. The relatives were held in high esteem and kept together in their willingness to aid each other.

The duty of the neighborhood (we can touch but lightly on this and the following phases of peasant life) was reciprocal service in times of joy and grief. The community was an economic, legislative, social, and law-enforcing corporation, and it gave aid to the poor through the *Allmende,* the community property. It was more than an administrative district thoroughly supervised by the control government. The young men's societies (boys' brotherhoods) served the masculine youth in the matter of self-education and discipline in amusements. The spinning room was the place where, in addition to women's work, recreation and entertainment were carried on within the peasant's home. As long as the older people influenced it the home certainly had great value, especially as a preserver of folklore and as a medium for transmitting traditional lore.

At festivals and games, descended from the old field-gathering (*Feldgemeinschaft*) and for the most part closely associated with nature and the changes in season, which took place in the open on the village green, the whole community got together, rich and poor, old and young, all classes. The celebrations, to mention but a few, included the driving out of winter, Mayday, Pentecost, St. John's Fire, the harvest feast, and the day of church consecration. They involved the whole village, and were outstanding events in the life of the community.

What then was the place of religion and faith? Were these merely external and habitual? No, the whole of life was animated by faith in God. In his occupational labors the peasant had the consciousness of working together with God. "If God and the peasant were not, you would have nothing to eat any more," is inscribed on a picture of which we will speak later. People spoke of "the dear God." God sent the temperature and happiness and misfortune; all was God's doing; nothing was accident; misfortune was something of a visitation—a

punishment by God, a kind of divine judgment. One did not leave a room or return to it without taking holy water and making the sign of the cross "in the name of God." "In the name of God" one went to work; with "Giddap, in the name of God" one drove away from the farm; at the beginning of sowing one said "In the name of God," or "In the name of the Holy Trinity." Salutations other than the often used "Praised be Jesus Christ" were "Greet God," "God keep thee," "God welcome." After sneezing one said, "May God help." "Praise and thanks to God," said the peasant when he was asked, "How are you?" "Well, praise and thanks to God." Now one says only, "Thanks for asking." "As God wills it," one said in misfortune. "If it is God's will," one said while planning for the future. "May God govern it," one said if he wished to do something important. "All with God," one said before beginning something difficult; "With God's help," one hoped to finish what one planned; if one spoke of a possible coming misfortune one interjected, "May God prevent it!" Who does not know older people who conquer every misfortune with the words: "Who knows what it is good for? God knows why!"

With "May God return it" the poor man received his benefaction after he had said the paternoster; with "God bless it," one gave alms; the pious gift one called "God's penny." Alms were collected in "God's box." "God bless it," the innkeeper, too, said when he gave a drink to a guest. The servant in many regions said: "God return it," when he finished his meal in the "Lord's corner" of the house. Whatever grew in the field, especially grain, was God's gift. When one entered a stable, when one looked at other people's cattle, one had to say: "God keep it." . . .

In Hesse one invited the godfather to the baptism with: "Our Lord has added to the world and given me a son. You are to assist at his baptism and give him your name." In other places the baptism was announced with: "God has blessed the world and given me a son." Therefore one spoke of the "blessing of children," which has now become more and more of a burden.

Old people said when they spoke of dying: "If God only would come soon," or "God will come soon." If one announced a funeral one said: "God has visited us." When a death happened in a family of the Eichsfeld the relatives came and said: "We are grieved that you are sad." The mourners answered: "It was God's will." In the Niederlausitz, whenever a virgin was buried the mourners shook hands with the parents and said: "I congratulate you on the heavenly marriage of your virgin daughter." If one spoke of a dead person one said: "May God make him blessed," or "May God console him," or "Our blessed Father."

One heard pithy sayings: "The old God still lives"; "What God does is well done"; "Everything depends upon God's blessing"; "God has given, God has taken"; "God's mills grind slowly but surely"; "God lets none mock him," and so on.

When everything is related thus to God, there is true religion. And if one thinks that all these things were just thoughtless habits, one may nevertheless believe that there must have been a deep piety in the people in order that they should have become habits, and that the clergy and the worldly educators ought to have drawn the people's attention to the value of these habits. . . .

In former times in the country something was always heard in favor of spirit and sentiment in the traditions of the people and the family. In the houses one found pictures with verses. On the [picture] "House-Benediction" was a fervent prayer in verse in which house and family and men and cattle were placed under the protection of the Lord. . . .

In the past one could always find something for both heart and mind in the folklore and family tradition: sagas, fairy tales, legends, pieces of fun, proverbs, songs, riddles, local jokes, the whole spiritual heritage of the forefathers. Where does one in these days hear a cradle song? In former times they were held in high esteem.

In the past one could find creative culture also in the country. There was a time in which people built their own houses, or had them built by village artisans; a time when the furnishing and the making of tools and utensils was done by the peasant himself, or at least by the village carpenter or smith. There was a time when people created their own entertainment by the family hearth from folklore that contained much wisdom. For the children there were songs of childhood, proverbs, and fairy tales, and later sagas and legends. For those of maturer years there were the heroic and popular books and the collections of funny stories and folk plays. All ages could enjoy the proverbs and the folk songs.

The older people, who also received intellectual and artistic stimulation from the higher forms of this culture, were not less intelligent than we; they were forced to use their intellectual faculties to a high degree. . . .

"However, these times have passed: the songs are largely silenced, the stories and sagas are forgotten together with the manners and customs of those simpler, more self-sufficient, and nevertheless more comfortable and charming times; the old storybooks lie in the dust —or they disappeared with the holy pictures when the room was whitewashed the last time and the lexicon, together with the prayer book for enlightened Christians, came into the home."

With this complaint Guido Görres in 1846 finished his introduction [to his *Deutsches Hausbuch*]. Today in the country—to consider this first—life itself, and whatever is to be seen and heard, has become poorer in stimulation, in educational value, and in ability to provide charming and beautiful entertainment. What is there today? Work, gossip, the attractions of the saloon—drinking, card playing, and dancing. Life has become more bare and practical, more superficial and worldly.

II. THE PECULIARITY OF THE NEW VILLAGE CULTURE

[The new village culture] is not a quiet, healthy, continuous development; it has broken with the old village culture. . . . In the simple mind of the people this striving after the new is not inherent. On the contrary, the people, like children, love the monotonous and the well known, in manners and food, in play and song, in houses and men—in short, in everything (Jer. Gotthelf). The spirit that desires the new and the strange comes from the city, especially the big city. Country people are unable to accept the novel at once.

The new village culture is without the tradition that should rightly be the fundamental law of all human development. Everyone does not begin anew. The heritage of property binds the generations together and produces a lasting cultural creation. Spiritual and moral possessions are the best inheritance. Not everything that is inherited is a real possession; it may well remain lifeless if it is not used practically. "Earn it, to possess it." It is necessary to lean on the old and tested. A character is formed through relationships with other characters; a Christian through relationships with other Christians; and a peasant through his relationships with his forefathers. . . .

How much the peasant owes to the past! How far the past has developed the art of cultivation, of vegetable growing, and cattle-raising! That knowledge is something no one would like to lose. But it might be the same with regard to the fine spiritual, moral, and historical tradition. There is no longer reverence in the country. The word *"Altehrwürdig"*—the revered old—no longer seems to be known. The traditional is felt to be a fetter. Reverence has been replaced by a craving for the new and the foreign; the place of loyalty has been taken by calculation. "Reverence makes a man of man," says Goethe.

The new village culture is a foreign manner of living taken over—as far as possible, of course—through a sacrifice of the native culture. The German has always been attracted readily by the foreign; why not the peasant? He wishes to imitate the city dweller as much as possible. He has the feeling that life in the country, forced on him because of his occupation, is inferior to the "better" city life. He no longer has confidence in himself. It is said that whoever eats of the

lotus fruit has no more taste for the daily bread of his native land. The new village culture renounces its peculiarly local characteristics. If everything in the country should become like the city, life among the people would no longer contain tribal or peculiarly local differentiations. In Swabia, Franconia, Hesse, and Silesia, the same kinds of houses, furnishings, and clothes will be seen. Whoever has seen one peasant or one house will know them all. A people that renounces its own peculiar characteristics becomes merely a mass, an unindividualized crowd. Man needs the two bonds of class and nationality (*Volkstum*) to attain truly human stature; otherwise he becomes a cipher. Love for the homeland is destroyed. Where there is no consciousness of value, there is no inner bond. Therefore those who could easily find their living in the country leave it with an easy heart. With the passing of love for home the national feling disappears also, as must be shown in particular. The peasant becomes a man at home in any part of the world. This is even praised today (by Hermann Keyserling, *Reisetagbuch eines Philosophen,* II, 800)* as a superior condition—this separation from the native soil, freedom from tradition, and indifference to the inherited vocation.

The new village culture involves an external refinement, a certain polish; it means having better houses and "elegant" furnishings, and dressing, talking, and amusing oneself in the urban manner. In the first place the country has not accepted the best features of city life, but rather the sensational and the striking.

The order in which urban manners have entered the village is noteworthy. The disappearance of the old and customary peasant dress marked the beginning. First the men abandoned it, then the women. The newly built houses departed from the rural style. Then followed the taste for "pretty" modern furnishings, especially in the parlor. One no longer looked for comfort and lasting value but for glitter and appearance. Then events moved fast: the utensils, the customary home entertainment, in many places also the given names, the language, the entire social life, all became more "refined," and "well-bred," as it was believed. The change began with external things and progressed steadily into the inner sanctum of the house. The method of making a living has changed least; this, however, has also become more insipid as a result of the increased sale of farm products and the use of many inferior substitutes. (*Bauer, es ist Zeit,* 214.)

All that the peasant adopted from urban culture may be seen very clearly in the suburbs of the big cities, where the people have partly the manners of the country and partly those of the city. Often they have the faults of both country and city. The new village culture is

* Editors' Note: This has been translated into English.

without art or poetry. It has destroyed the peculiar beauty of country life. Every life has its own particular form that it assumes naturally. Whatever foreign matter it receives it digests as long as it is healthy according to its own laws, just as the old peasant life did. But the new form forced upon it is ugly; it is like a decorated park. People today have lost all taste for what is suitable to the country and what is not; in this sense, distinctions between the beautiful and the ugly are no longer made. To the shrewdly practical man, emotion, sentiment, imagination, and mood seem undignified weaknesses. "What can I buy myself for it?" He is like Judas, who said, "What will you give me?" Only money and financial success matter.

Great art is not displayed by the peasant who wears cuffs, nor by the young village fop, nor by the country girl with chiffon hose and a boyish bob, nor by the cigar-box house, nor by a peasant room furnished with a buffet, nor by all these together; but rather by peasants who wear their old village costumes, by the old-fashioned wedding procession, by the old house, and the little corner in the house that is dedicated to the Lord. The peasant of the past had a peculiar charm for the urbanite; the citified peasant will please him less. . . . The new village culture lacks moral stimulation and sentiment. Where tradition and loyalty to one's forefathers and simplicity and worthiness are no longer of much value, manners become more unrestrained, more lax. How much has been lost in example and concrete instruction, how much in practical wisdom, since the peasant families stopped telling stories in the evening! The new regimen in the country fosters rebellion and revolt, at least at first. The first girl who wore a hat instead of the customary shawl did it not for pleasure but out of obstinacy and a determination to fight. She had to stand much opposition, much mockery, before she succeeded.

Peasant life has become poor in sentiment through the disappearance of the old folk-celebrations, through the silencing of sagas, fairy tales, family traditions, and songs. Sentiment has more reverence for the old than reason. Thus rural life became increasingly sterile, more and more lacking in sentiment and spirit. Excessive amusement has only increased this decadence.

How the life of the past was filled with poetry, sentiment, and religion is shown in Ludwig van Führich's biography of his father, Joseph:

It sounded to us like music from a century long past when my father told us of the life in his home and in his neighborhood, where poetry and reverence still permeated the whole of life; where at Christmas time in many houses people spent many days in building a manger; where hundreds of altars were built in the streets to St. John of Nepomuk (my father lived in Bohemia); where people still sang their morning and evening songs; and

where friends and neighbors gathered before the houses in the cool summer evenings or in the spinning roms in winter, singing and telling sagas. Such a life was in close harmony with the lovely, and at that time still wooded, region in which my father herded the cows during two autumns. . . .

The peasant is not a full peasant any more, even if he has everything that he needs to make him one. Formerly, an economic distinction between full, half, and quarter peasants were made on the basis of the amount of landed property held. In a strict sense one can still do that today. Frequently, however, the peasant has lost his pride in his kind; he goes begging to the city. It is true that he was flattered when people had to come to him from the city to purchase his produce at high prices during the War. That, however, did not last long. Once more, now, he is likely to believe that every city dweller and every employe has a better lot than he. Even if he often says this merely for the sake of appearances, because the others like to hear it, he is still of the opinion that the city is always superior to the country. In reality the city is not better; the country is equally good. He will not understand that he would be quite as superior if he would perfect himself in his own manner.

He has lost the instinctive feeling of security in his life, the consciousness of his strength and importance, that would give him a forceful personality. He has lost that inborn appreciation of genuine worth that knows intrinsic value and can estimate the foreign according to its true importance. His standard of measurement has become wrong. His sense of the genuine and the artificial, the noble and the common, has frequently disappeared. How does the citified peasant regard the past, the old home, its furnishings, his occupation, and country life? He is ungrateful to the past, blind to the danger of adopting urban ways; he fights against everything that befits his way of life. He has a double nature: on week days he is a peasant because of his work; on Sundays he wishes to be something else and wants not to be recognized as a peasant. He lacks faith in his own worth.

In his circumstances the peasant has all he needs; there is much that is worth while in his occupation, his life, and his surroundings. These, however, must receive a personal stamp through self-confidence, or as Gotthelf calls it, through faith in himself and his duty. This self-confidence leads to work; it leads also the development of the natural faculties and the use of life's values.

The peasant has become the victim of a new serfdom. The old bondage suited him and was fitted to that particular time, but the new is contrary to his nature and contrary to the independence of which our age is so proud. We need, therefore, a new peasant liberation from the foreign domination of the city and its culture.

III. HAS THE OLD VILLAGE CULTURE STILL VALUE FOR THE PEASANT TODAY?

As long as the peasant lived in seclusion was not the traditional way of life the best form of existence for him? Now, however, when he is drawn into the cultural life of the city, should he not accept the mode of the city? Then the peasantry [as a specific class] might perish, but would not the peasant life take a higher form, namely, that of the city?

The answer is that the peasant is not drawn into the cultural life of the city and cannot acquire, as conditions are now, the most valuable things of the city (intellectual alertness, open-mindedness, will power, and a capacity for quick decision). He does not even need them. His life has another current and other values. Both Danish and Icelandish peasants are better educated than the German peasant, but they wish to be peasants, nevertheless, and wish to be known as such. Friedrich Paulsen says: "We call a peasant an educated man even if he has never gone beyond grade school, or has not even heard the names of Schiller and Goethe, if he uses rationally the opportunities that his circumstances afford, is able to formulate a consistent philosophy concerning the natural and historical world in which he lives, and can adjust himself by the use of rational judgment to the circles in which he moves."

The old peasant life has great value as a foundation for the new village life. The main reasons are the following:

1. Some very valuable things have perished with the old village culture. It may also be said that the new village culture has destroyed much good. It is sufficient to consider the following four evil phases of modern times. (a) The disruption of patriarchal family life. (b) The cessation of the education of heart and spirit in the family. (c) The regulation of economic life wholly on a basis of financial gain. The effects of the striving for money in the country have already been discussed. When money dominates, the soul wilts and morality suffers. (d) The excess of social life. We observe in the country the multiplication of societies purely for amusement, having too many and too frequent celebrations: free young men's clubs, bicycle and amusement clubs (*Die Grüabigen, Weil's gleich ist, Eintracht,* etc.). The only pleasure desired is that which is to be found in the *Hetz* and in the *Gaudi,* that is to say, in hurly-burly and a "high old time," accompanied with the greatest possible laxness. People devote themselves to dancing and sports, frequently to excess. . . . But what do they do for the physical and spiritual strengthening of the young men?

2. The old peasant mode of living coincides frequently with the folk mode. The people, according to Riehl, are the simple-mannered

class as compared with the formally educated strata. The popular character is distinguished by an unsophisticated and unphilosophic life of feeling. Cultural life is the conscious, individualistic life of reason. These are not fundamentally opposed but the phases of development.

In the past the people were much more alike. Their original way of life may be called the folk way. Progress has made the other social strata, especially as a result of city life and education in school, much more self-conscious; but the life of the old peasant exemplifies in its fundamental characteristics, even at the present time, many of the conditions under which our entire population lived centuries ago.

The people are like children: they live in and with nature; everywhere they read life and spirit into it; and they understood all natural phenomena. They think in pictures and parables and know things only from actual observation. Feeling dominates; they love play, especially in the open; they love motion and bright colors; they seek company and find safety in it; and they are sincerely pious.

All these qualities are found in the people—in their original, natural, and familiar life: closeness to nature; personification of nature and the endowment of the soulless with feeling; explanation of natural conditions and phenomena; objective and comparative thinking; concrete language; wealth of sentiment; strong family ties; and strong bonds between neighbors and relatives.

Not only has the folk way historical value comparable to that of an old document, as a peculiarity and a rarity of past times, a relic of a less developed human stage; it still has actual, present value for us. We see it constantly recreated in the child. A great part of our people still live spiritually in this phase of development, especially the country people. If it [a people] is to remain strong, it must preserve itself in the never ending youth of its folk ways. The really cultured person wishes to combine the best parts of all phases of development in himself, just as in the man there remains much of the child and the youth. He returns again to simplicity ("culture is a new naïveté"); he seeks to know nature in order that the progress of his reason shall not overrule and extinguish his feelings and sentiment. Sagas, fairy tales, and so forth, have not the significance to the modern man that they had to past generations; but as long as poetry is honored and valued folk ways will be esteemed. The points of view and perceptions of the people are poetical perceptions. A poet is one to whom everything becomes a picture, one who sees the world in pictures. A great number of folk songs, sagas, and fairy tales will remain an eternal treasure for mankind. The secular books of the sixteenth and seventeenth centuries that were conceived purely by reason and contained the knowledge of those times are today without any value (apart from

their historical importance, of course). They are inaccurate and false, while the folk productions of that time—tales, sagas, and so forth—inasmuch as they contain the divine spark are still of great importance.

It was for this reason that the brothers Grimm took such an interest in folklore, and gathered sagas, fairy tales, and old juridical customs. Arnim and Brentano revived the old folk songs in *Des Knaben Wunderhorn*. Professor Riehl of Munich has wandered through the German country, observing the local peculiarities of German communities, their houses, costumes, and so forth, and has written *Land und Leute*. (This is still worth reading and is of basic importance, even though many changes have taken place.) The arts of building and of house-furnishing among the people still are respected; the youth movement wishes to restore the old atmosphere and life through a return to simplicity and the folk ways in song, fairy tales, dance, and play. Folk poetry has again been included in readers.

If the folk ways are so valuable, should the folklore of our rural population be found only in books, and should the art of the people be found only in collections and museums?

3. How are love of the native land and preservation of home-culture to be made possible without reverence for the old and traditional? The old, the homely, has been lost because it was not honored, because it was even despised when compared with the foreign. It is to be hoped that children hear much in school of the homeland, that they hear the old praised: "That is worth something—it is something old." At home, however, they still hear it said of the old "trash": "That isn't worth anything; it is old." Sentiment for the native land revives and spiritualizes the old, for it surrounds it with memories and preserves it with gratitude. Love for the homeland recognizes the historical, moral, and sentimental value of the traditional, and lifts the individual above his selfishness.

IV. HOW CAN THE PRESENT VILLAGE CULTURE BE RENEWED?

"Of the old you should keep the beautiful and good.
Whatever is not worthy of praise, put it aside."
(At the entrance of the Willibaldsburg, in Eichstätt)

The culture of the city cannot be kept from the country. That has already been suggested. Such a thing could not be done even if the peasant were still quite untouched by it. The father of F. M. Felder, the poet of Bregenzerwald, has spoken of this: "A poor peasant must go through the world like a led horse, with blinds before his eyes, so that he can see neither right nor left—not the disturbing, nor the attractive, nor the terrifying, but only the narrow way in front of him."

Today, in the age of the newspaper, of commerce, and of political press-agenting, no country and no section of the people can isolate itself from its surroundings.

Of course the old peasantry, although much weakened, is still alive; remnants still persist on the land and in the mountains and the forests. The old still lives in the temperament, the qualities, and the habits of peasants of the present day; it still colors their early memories and is expressed in their language.

What ought the village culture of the present day be like? This is clear what has been mentioned previously: it should be the old peasant culture without its faults (life in a rut, obtuseness, and mistrust), and enriched by the good brought forth by the new times (better economic management, community spirit, professional pride, and the conscious desire to make one's life better and more elevated). True progress is not incompatible with loyalty to one's heritage.

The old peasant culture was not aware of itself—it was not a willful working on the soul. It came naturally; it was traditional; and it was passed on from father to son. Nevertheless the old peasant life carried culture within itself, a spiritual elevation and an enrichment of the heart. Apart from work there was a higher life, which satisfied the better part of man. The new peasant culture must become more aware of itself, more an object of desire; the life of the present day should find its justification therein. The motto of the composer, Max Reger, should be applied to the peasant as well: "Simple, honest, and faithful." Simple on the outside, honest in the heart ("what you are, you should want to be"), and faithful to the forefathers.

1. *The surviving part of the old culture must be reverenced, preserved, and cared for.*—What is left of old furniture—boxes, chests, jugs, and pictures—should no longer be given away or destroyed. The same is true of books, papers, even letters, which have importance for the family. . . . A family that does not own a home of its own to pass down to the next generation by virtue of that fact already lacks the best and firmest basis. In the process of frequent moving how much is discarded as superfluous that is bound up with many dear family memories! In this way almost all is lost, and the man of today becames an eternal wanderer, if not a gypsy.

The peasant should be well off in this respect. The proverb says that "a house loses nothing." Of course, there cannot be many letters from the parents, for the peasant is not often away from home. But even the few that exist should be preserved. How many letters from the battle front of 1870 are still to be found? How long before all the letters and cards written during the World War will be destroyed? Children are even permitted to play with them.

Above all, more regard for family history should be developed. Everything that is known of the forefathers should be gathered together and this house chronicle should be continued. . . .

2. *Specimens for schools should be collected from the materials of the old peasant culture.*—Since little is to be seen today of the old peasant culture in most parts of the country, one must use books and pictures. In the Winthir School in Munich—a building of five stories—one may see in the stairways and the halls over two hundred pictures, mostly friezes and sculptures, made by the children themselves. The subjects are taken from child life. In the same way the country schools, the agricultural schools, the rural schools of home economics, and the gathering places of the country youth ought to have pictures of the old country life on the walls and the stairways. There should also be folders of such pictures for public inspection.

3. *Old usages and celebrations that are considered worth while should be reestablished.*—In one of my neighborhood villages the teacher has revived interest in the "St. John's fire." He has taught songs and round-dances, and made a little speech about the meaning of the celebration, which after that showed sense and beauty and proceeded in an orderly manner, whereas previously there had been only noise and objectionable turmoil. The clubs and the neighboring communities were invited. The invitation to the festival went to the mayor, who said: "And they want to introduce such an old custom again!" Yes, we do want to introduce again the beautiful old customs and celebrations.

The development of all culture proceeds from a manifold bondage to a constantly increasing awareness. Customs and usages today should be something personal growing out of a communal feeling. Whatever in the past grew out of mere habit, custom, and tradition should now come from a conviction of its value for the education of the children and the betterment of community and national life. Artificially these things cannot be brought about—of this we will speak later—but the feeling for them and a knowledge of their values can well be taught.

What customs and usages should be preserved, or revived and spiritualized, and how? Religious, domestic, and church customs [should be taught] throughout the church year.

Domestic customs.—The newly built house is blessed. The memento of this ceremony is the "House Benediction"—a picture with a sacred inscription. When a child is born a tree used to be planted; it was believed that the child progressed with the tree. The father should be present at the baptism. Alban Stolz writes that: "When a child dies and the dead body, the empty shell of the flown soul, is brought to the graveyard, the father in his Sunday best, all the relatives, and many others go with it; when, however, the child is carried to the church to

be accepted as God's child, now and then the father remains away, just as if it were not his affair. Go along, meditate in the church, and call to your mind how you should act that the child should not perish later! For such a business one must have time." In the past, god-parenthood was taken seriously as a step towards heaven.

Cradle songs, rocking songs, children's prayers in rhymes, and children's games should be taught again. The name days of members of the family should be celebrated. When we were still very small we had to say a short poem; when we were bigger and went to school we wrote a letter of congratulation; the girls had to knit or embroider something for their father, such as embroidered house slippers. Before the wedding the bride received the parents' blessing and thanked them for all the good things they had done for her. Silver and golden weddings should be celebrated. Good neighborhood feeling and readiness to help in every house should not be forgotten.

Customs at a death.—The clock on the wall was stopped (for the dead his time of life has passed, and eternity begins); the death of the master was announced to the animals in the barn and to the bees; a wake with prayers for the dead was held (preferably in church); banquets were held for the dead wherever it was customary.

The winter evenings should again be passed with the telling of stories, reading aloud, singing, and playing. If we let everything that warms the heart and brings men closer together disappear out of the family, of course little is left but work, gossip, and crude amusement.

Customs of work.—The first time the horses were yoked in the spring the driver made the sign of the cross three times with his whip. When the first load of dung was driven out of the yard holy water was poured over it. When all the various grains were sown, they were first sown in the shape of three crosses, "In God's name." (Even now, when the sowing is done with the machine, the three crosses are sown by hand.) When the peasant finished the sowing on a piece of land he made three crosses with a stick. At harvest time the first handful that was cut was laid out in the form of a cross. The first three sheaves were kept apart. The last sheaf, too, had significance. Whenever the grain in the barn was moved about or stirred about the peasant took the rake and made one long stroke and three horizontal strokes—that is, three crosses.

Celebrations.—These included the driving out of winter, or the carrying out of the dead; a spring festival for the children; the erection of a Maypole for the grown-ups; the decoration of houses and rooms with young twigs at Pentecost; St. John's fire, and others. This is only a general collection. In every region the "desirable old" should be preserved and renewed.

There is this also to be said: We do not deplore the perishing of this or that custom, of this country celebration or the other. One cannot take account of any one particular thing that has been created by the past. Each time has its necessities and tendencies. "The living is right" is true here also. But we complain because traditions as a whole, the atmosphere and the community spirit, have been lost. Even if the individual has become independent (and much is of necessity lost in this process), he nevertheless needs others to share his joy and grief, just as he always did. Everything ought not to be destroyed in the manner of the barbarians.

4. *Education from childhood on.*—"God has made the peoples curable.". . . A simpler and more worthy life must be striven for. This simplicity does not mean a lack of necessities. One might suppose, Lembke says, that this less real than apparent culture covered a terrifying barrenness and a lack of necessities; that one could not attain simplicity in these days because the content of human life generally, and the life led by the people, had become too sterile to make the simpler forms valuable by breathing spirit and feeling into them.

A sentiment is needed that will completely reject alien elements that do not harmonize with the peasant nature. Respect for the worthy, the true, the tested, the essential, and the concrete, contempt for pretenses, for the incomplete, the artificial, the false, and the weak, that is the feeling that ought to reappear. In the past this attitude was taught as a matter of course; now it must be cultivated consciously. A world must be created systematically for children that will awaken in them the peasant feeling; one cannot preach it to them. Their life's necessities must be pointed out to them. They need a definite aim: "What does my life demand of me?" The essential thing is always right conduct. Is it possible to teach this? Yes, for man contributes to his own fate.

Could we not so hammer into our peasant youth the fundamental necessities of their lives that they could not but think as peasants? There are in the peasant life so many truly valuable things that can stimulate and arouse young people if consciousness of them is awakened and fostered! . . .

We hear the objection that it is impossible to teach a regard for class, for folk ways, and homeland; it is impossible to deal with it in the schoolroom manner since it concerns values fostered by feeling and not by reason.

The answer is made that one cannot teach it like a multiplication table. But some reasoning lies at the basis. In the human being, reason, will, and feeling are combined in one soul. Reason is the light that illuminates the way ahead. Moreover, one must appreciate intellectu-

ally what is valuable in social position, in folk ways, and in the homeland; to this, then, is added the stimulation of feeling. Whatever may be recognized through reason is teachable. Therefore the eyes of the children and the young people should be directed towards whatever is valuable in peasant life. . . . Exhortations alone will, of course, not do it. But if the right persons, filled with enthusiasm, work in this manner they can break the ground for a new peasant culture.

Who shall educate? The modern family fails. The children, for the most part, grow up in surroundings that have nothing in common with the old peasant and folk ways, either in practice or in feeling; otherwise this book might have remained unwritten. They no longer live as peasants. Class consciousness, modes of thought, and usage—the entire family life should be that of the peasant, but it is so no longer.

Because the family fails, life must be enriched from the outside through the children and the young people; the valuable part in what the children learn about peasant culture and folk ways in school, in what, grown older, they hear in the vocational schools, in what is sung, told, and played in the young people's clubs, should reach the family and develop in it a happy peasant feeling.

(a) The day school as it used to be in the country has found many opponents. J. F. Dietz writes in his valuable book, *Das Dorf als Erziehungsgemeinde* (Weimar, 1927, p. 131): "The school had no time for the cultivation of peculiar village characteristics, or for the fostering of village culture, if it wished to consider all the material prescribed in the educational plan." The work of the village school was, for the most part, flat, superficial instruction, not really thorough education, and one must agree with Lassmann when he writes that "I am convinced that the grade school in its old form of teaching has destroyed more than it has built up—that our villages were abandoned more quickly than would have been the case otherwise because they taught only reading, writing, and arithmetic, and neglected the life of the spirit and the homeland." L'Houet, similarly, renders a harsh judgment concerning country schools (*Zur Psychologie des Bauerntums,* Tübingen, 1920, p. 62): "In the peasant school the peasant culture is not the main thing." Our folk schools, although they do not intend it, will succeed more and more not only in weakening the peasantry physically in a marked degree, but also, what is still worse, in bringing it to despise and neglect its own characteristics.

According to the new Bavarian educational system the rural schools could be very much more valuable. The model of a rural school in a region where the population was entirely, or almost completely, peasant, would be like this: The schoolhouse is built in the style popular in the region, exactly like an attractive peasant house; the furniture is

as far as possible in good peasant style, so that the child does not enter a strange environment but simply a somewhat elevated peasant life. In this way pride in the old will be awakened and its preservation assured. The girls should care for the flowers in the pleasant months. The children learn reading, writing, and arithmetic, and whatever else is necessary for the life they are to lead; in addition, the teacher frequently takes the children out into the open country, which later will become their workroom.

In this way the children live the peasant life at school; a beautiful spring feast, a St. John's fire, with songs and dances, gives much pleasure to them and to the grown-ups. A Christmas celebration is also held in school; a manger is built and carols are sung. By the time the children leave school the young people's societies should be under way, and these may parallel spiritual and physical development.

The songs of the homeland must not be forgotten. The mountainous regions, above all, and areas particularly proud of their tribal ancestry, have their own songs. Whatever lies dormant in the heart of love and loyalty to the paternal home and to the native land and region, for which the individual cannot find words nor music, comes to life in the song. The songs tell of the home, of the maternal heart, of the parental love and the parental grave, of the beautiful green valleys, and the sunny heights of the mountains.

The school once more shows respect for dialect, which is not a degenerated written language but the foundation for our language. It is unwritten and is handed down only by word of mouth; one may designate it today as the peasant language. May our schools become better in this respect than they were in the past.

(b) The rural vocational school cannot be a special school; it should, however, provide something more than a mere repetition. It should provide an education in rural ideas and in the peasant life. All vocational schools try to teach the occupations chosen by their students; the rural schools should do the same. Only in this way can the educational problem be solved. If the student does not feel assured that he will learn more about his occupation and his vocational life in these schools, he will not bring to them the necessary interest. In proportion to the student's spiritual development and his cooperation in the rural economic system his education in these schools will become deeper and more constructive.

(c) The agricultural school, for which the best place is not the city but the country, and which affords a closer connection with the practical phases of peasant work, should be directed and taught by teachers who know and respect the peasant way of life.

(d) In schools teaching home economics the girls should be taught both the theory and practice of domestic and farm management, but at the same time they should be trained for their future family life. Since the modern spirit of calculation and strife for financial gain enters the life of the peasant wife also, care should be taken to develop her spiritual nature.

The girls should learn singing and social games; they should become familiar with the old traditions in sagas, fairy tales, and so on; they should be taught appreciation for good peasant culture in architecture, in household equipment (pictures in the peasant home, the Christmas tree, and the cultivation of flowers), and in dress. When they return to the parental home they should help renew the family life. As the future housewives and mothers they really should become what they have been universally praised as being: the heart, the soul of the family, and the visible guardian angel of the home life. "The peasant woman of the old type was the priestess of the home. She was in close contact with the spiritual world; with fine understanding she ascribed all the events of the family life and the community happenings to divine providence. Her simple and unwavering faith kept the entire farm under her authority. She was the bearer of the ancient traditions and usages from birth to death."

(e) The young people's societies should continue their work of widening the spirit and developing character. In these the young should learn through experience the joy of reading a good book, of looking at a beautiful picture, and of listening to uplifting music. In these societies they should sing, play, and work together in dramatic presentations, and wander through and learn to know the homeland. There they should learn how to pass leisure hours, the time for self-education. A young man from a little country town told me that his comrades were glad when Sunday afternoon was over. It is very sad; a young man, physically and mentally fit, has some free time that he could use according to choice and ability for games or music, for reading or wandering, with others or alone, but he does none of these things. He is bored with himself instead. "Little does he who has listened to you only when you were at work know of you; but tell me what you do when you are at rest, and I will tell you what you are." The youth movements should prepare for, and connect with, the young men's societies.

(f) The Christian peasant societies can do much in this direction. They could do even more if all peasants were united in them in a real class organization. Then they would have more peasant spirit and would become more conscious of their own culture. Every society would

influence its members and its coming generation so that all would follow the same model.

The duties of all rural schools and educational societies are to remove the feeling that country life is inferior; to stimulate enthusiasm for it, and to awaken conscious appreciation of it; to lead this enthusiasm into practical channels so that even in the country it will be possible for a man to make something better and higher of his life. As Schmeller said in 1812: "Self-confidence alone advances us; the youth must be taught to consider his own the best and most beautiful." For this the past is necessary, and the old peasant culture. "Just as a tree grows with its roots in the depths and its branches high in the air, so man must reach out not only into the future but also into the past. That alone is maturity." (Wilhelm von Scholz.)

(g) One should not overlook the work of the associations that promote rural welfare and native culture, of which the goal is to "create a rural population that is healthy in every way, that knows its worth and its importance for the land at large, that is happy on and proud of its own sod, and cultivates it with joy, that holds the spiritual values of the country life higher than the external advantages of city life"—and, I should like to add, that consciously clings to the essential and the good in its old ways, to its piety and simplicity. The rural welfare societies and native culture associations wish to combine the best, both old and new, in country life.

(h) Good influences might come from the city also. For a long time peasant ways were despised by the city and by "cultured" persons, but now once more peasant culture is beginning to be valued. The longing for the quiet of the country, its meadow, and the forest have guided the city people to understanding; they have come to value the beautiful peasant houses, the old peasant furniture, costumes, and so forth. City people have recognized the beauty of boxes and chests, of dishes, plates, and pitchers, pictures, embroideries, and tombstones, and have taken all these over as patterns in their decorative art. They have talked the peasant out of many old furnishings for little money.

The recognition of the value of folklore has begun in educated circles. This may be explained through the attraction of opposites. Our times are become too sober and too matter of fact. The intellect is overeducated; sentiment is neglected. Therefore the old folklore, which filled life less externally but more directly with moral stimulation, can be of much value here. Artistic poetry, tired of endless soul-dissection, tired of hot-house sensations, is simply the outgrowth of the "art of words" and can find refreshment in folk poetry and renew its youth by returning to old materials and simpler forms.

The youth movement in the city has revived many folk songs, folk dances, and folk plays; it has again brought into honor the dress, the life, and the old peasant virtue of simplicity. The art that is esteemed most highly by the youth movement (Ludwig Richter, Hans Thoma, and Schiestl) resembles most closely that of the people and the peasantry.

The core of peasant life will remain if the peasant, from childhood on, is educated to the peasant way of feeling and thinking; if he learns to judge his class correctly, the values in his life, the advantages of the country, and the difference between the country and the city; if he becomes conscious of himself, and has pride in his class just as the mass of laborers are conscious of their distinctions; if he learns to content himself within the boundaries of his own life, and if he perfects himself within these limits. We will work towards this end.

If the peasants but knew how much strength rests in them, how very necessary is a strong peasantry to the physical and spiritual renewal of our entire culture! If only they know how much they are able to do for the whole country!

When Dostoievsky was a child he once went too far away from his father's farm. He went straight on through the fields. Suddenly he stopped, frightened; he seemed to have heard the call: "The wolf comes." Immediately he wished to return to the protection of his father's house. He saw a peasant plowing in a near-by field. He ran to him, crying, clung to his arm, and stuttered from the terror that had come over him. The peasant made the sign of the cross above the boy, consoled him, and promised him that he would not let the wolf eat him.

That is a symbol of what may still happen. It may be that the other social classes will yet come to the peasant for protection. And the peasant, if he preserves himself in his proper state, in his efficiency, and retains his faith, will protect them and will not let them perish.

212. Shiro Kawada: Effects of Modern Ideas on Rural Life*

The rural decadence at present . . . is traceable to two causes: the desolation of rural economy and the mental state of farmers. In considering the solution of the rural problems, therefore, the psychological phases of the problem should be studied. Modern ideas are closely connected with the rural decadence, and the proper guidance and cultivation of those ideas are necessary for the solution of the problem.

When the material phases of human existence are overvalued to the

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exclusion of other phases, as is the case at present, and money is regarded as everything, it is only too natural that farming should be disliked by ordinary persons. Agriculture, which is not a very profitable enterprise, cannot give farmers enough income to enjoy that material comfort which people engaged in other enterprises are enjoying. Modern people prize economic value almost to the exclusion of other values, such as ethical or artistic, and as long as this tendency continues there will be little hope of ending the dissatisfaction of rural people. One way of fundamentally solving the rural problem then is to bring about a proper change in the modern conception of human life and human valuation, to teach people that there are many things which are more valuable and nobler than money-making.

In order to modify this way of thinking the extension of philosophy and other branches of learning is of course necessary, and this extension of general knowledge should not be superficial and ephemeral. The national education, especially universal education, should be reformed. At present our national education only aims to teach technical knowledge to pupils and students, and the formation of character is utterly neglected, the result being that an intense ambition for material success is implanted in the plastic minds of pupils.

Even teachers are the victims of the fever of material success and many of them place money above all other things, so that school education has become degraded and without a guiding principle. Although this tendency is not limited to our own country, its disastrous effect should be fully recognized.

It is only natural that the more the youth of the rural districts receive education, the more insistent they become to leave the farm for cities.

In order to relieve rural districts, it is necessary to base national education on a more spiritual basis, for without such a reform the final solution of rural problems will be impossible. The improvement of normal education will be highly necessary in order to create more efficient teachers upon whose shoulders is placed the task of creating future citizens with blameless characters and personalities.

In the past this necessity has been neglected, and the reform of outward forms has been unduly emphasized. The establishment of facilities for amusement in rural districts and the increase in the material wealth of farmers—these have been strenuously advocated by many people. But it is evident that farmers can never get the same material wealth or comfort as the urban inhabitants. The true remedy of the existing situation in rural districts is to effect a more fundamental change in the ideas of the whole nation.

Lack of cultural facilities in rural districts.—If, then, the inhabitants of rural districts seek city life because of spiritual as well as material reasons, it is necessary that various facilities for material welfare should also be established in rural districts so that the inhabitants of agricultural communities will enjoy about the same material comfort as those in cities. This must mean an attempt to extend culture into the rural districts, and to break down the traditional policy of centralization.

The extension of cultural facilities into the rural district can be done by solving various questions arising from the concentration of those facilities in cities. There are very many of those problems, but I shall here take up a few of them.

What the farmers at present lack most in matters of cultural facilities are those concerned with medicine and education. Cities have many hospitals and good medical experts, but rural districts have very few of them. It is only too natural then that some farmers move to cities because of this inconvenience.

As to educational facilities, secondary schools, colleges, and universities are located mostly in cities, so that the youth of rural districts must leave their homes if they want to attend these institutions. The whole population of the country therefore is experiencing much difficulty because of the lack of proper educational facilities.

Another way of letting farmers, especially the day laborers, obtain the benefits of modern cultural facilities is to carry out various social policies and to assist the extension of social enterprises in rural communities. The most important of those policies is the enactment of tenant legislation. With the exception of a very few countries, modern nations have adopted labor legislation with regard to industrial laborers, miners, and transportation laborers, but almost nothing has been done by way of relieving the sufferings of farmers, although this question is now challenging the attention of civilized countries. Attempts have been made for the conclusion of an international agreement regarding a minimum age for agricultural laborers, woman labor, working hours, and wages for farm hands, etc.; and individual nations have also been paying much attention to those matters. Various social insurance for injury, sickness, unemployment, disability, and old age have also been adopted for agricultural laborers as in the case of industrial and mining laborers, either independently or extending those of the industrial and mining laborers.

In our country, health insurance is the only social insurance which has been established for laborers, but it has not yet been put into practice. Needless to say that we must follow the example of western nations in the matter of social insurances. What is most important is

that our agricultural laborers should enjoy the same benefits as other laborers. Unless this be done, a great injustice will be done to farmers, and their tendency to forsake their farms will be intensified.

The adoption of social policies is also important. In Germany and other European countries welfare enterprises are carried out in rural communities. Various enterprises to extend medical aid, libraries, amusement facilities, and relief works are undertaken. In the past those facilities were only established for the sake of city people, but the injustice of such discrimination is easy to comprehend. Farmers must also get the benefit of those cultural enterprises.

Summary: The urgent need of equalizing the opportunities of cities and rural districts.—I have already elucidated the general significance of rural questions. What should be remembered is the fact that our rural questions are common to the old European nations and are also found in the United States almost in the same forms as in our country as well as in the old European countries. In other words, agricultural problems are common to all civilized nations today. The general conditions of present-day civilization and those of the social and economic systems tend to give birth to those problems, and the advance of those conditions is bound to intensify those problems. The existence of those problems is not accidental but is traceable to the nature of the present civilization and economy.

As a consequence, the solution of rural questions is possible only through change in the tendency of present-day civilization and in the economic status, so that agriculture shall be a paying business and can exist side by side with commerce and industry. The chief aim of this change should be the equalization of the conditions of cities and rural districts.

If the fundamental solution of the problems is not effected, agricultural economy will come to the final doom, and the food problem will become aggravated, the consequence of which will be especially disastrous for a country such as Japan. But the disastrous consequence of the matter will also extend to other fields, such as the production of raw materials and of domestic markets. National life and social psychology will also be affected. In fact, it will be difficult to imagine the desolation which will characterize our social conditions after agriculculture has died down.

It is now high time that something effective should be done in order to prevent the general decay in agriculture.

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